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CATALOGUE

OF

WEST VIRGINIA UNIVERSITY,

MORGANTOWN.

FOR THE YEAR 1880-81.

WHEELING:
W. J. JOHNSTON, PUBLIC PRINTER.
1881.

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Calendar.

According to an order of the Regents, June 27th, 1878, the University year includes forty-one weeks, and is divided as before, into three terms.

The First Term begins on the first Wednesday of Sepetmber, and continues thirteen weeks.

The Second Term begins on the fourth Wednesday of November, and the Third, on the second Wednesday of March.

The Annual Commencement is on the second Thursday of June.

Prompt attendance at the beginning of each term is very important to the student.

1881.

June 2d.—Thursday, 9 a. m.—Annual Examination begins.

5th.—Sunday, 3 p. m.—Baccalaureate Sermon.

6th.—Monday, 8 p. m.—Regents' Prize Contest.

7th.—Tuesday, 8 p. m.—Anniversary of the West Virginia Historical Society.

8th.—Wednesday, 8 p. m.—Address to the Literary Societies.

9th.—Thursday, 9 a. m.—Commencement Day.—8 p. m.—Public Contest of the Literary Societies.

September 7th.—Wednesday, 9 a. m.—Examination of Candidates for admission.

8th.—Thursday, 9 a. m.—Regular work of 1881-2 begins.

November 22d—Tuesday—First Term ends.

23d—Wednesday, 9 a. m.—Second Term begins.

1882.

March 7th.—Tuesday—Second Term ends.

8th.—Wednesday—Third Term begins.

April 21st.—Friday—Junior Exhibition.

June 8th.—Thursday—Third Term ends.

Commencement.

Board of Regents.

No. Dist.	Name of Regent.	P. O. Address.
1	B. W. Allen,	Wheeling.
2	James Morrow, Jr.,	Fairmont.
3	M. S. Hall,	Harrisville.
4	D. D. Johnson,	Long Reach.
5	James Stewart,	Raymond City.
6	H. S. Walker,	Charleston.
7	H. C. Simms,	Huntington.
8	A. F. Mathews,	Lewisburg.
9	T. J. Farnsworth,	Buckhannon.
10	H. W. Brock,	Morgantown.
11	John A. Robinson,	Patterson's Creek.
12	D. B. Lucas,	Charlestown.

Officers of the Board.

D. D. JOHNSON, President.
A. W. LORENTZ, Treasurer.
HUGH W. BROCK, Secretary.

Executive Committee.

HUGH W. BROCK, Chairman.
JOHN J. BROWN.
D. H. CHADWICK.
PHILIP H. KECK.
W. C. McGREW.
JOS. MORELAND.
THOS. H. PRICE.
THOS. ROGERS.
E. SHISLER.

Secretary,
JOHN I. HARVEY.

Superintendent of Grounds and Buildings.

JAMES McM. LEE.

Faculty and Teachers.

*REV. J. R. THOMPSON, A. M., PRESIDENT.
Prof. of Mental and Moral Science and Evidences of Christianity.

D. B. PURINTON, A. M., VICE-PRESIDENT.
ACTING PRESIDENT,
Prof. of Logic and Acting Prof. of Mathematics.

†F. S. LYON, A. M.,
Prof. of History, Political Economy and Belles Lettres.

ROBT. C. BERKELEY, M. A.,
Prof. of Ancient Languages and Literature, and Secretary of Faculty.

JOHN I. HARVEY, A. M.,
Prof. of Modern Languages and Literature, and Librarian.

I. C. WHITE, A. M.,
Prof. of Astronomy and Natural History.

A. W. LORENTZ, A. M.,
Principal of the Preparatory Department.

H. W. BROCK, M. D.,
Prof. of Anatomy, Physiology, and Hygiene.

ST. GEORGE T. BROOKE,
Prof. of Law and Equity.

*Resigned March 12th.
†Resigned Vice-Presidency March 10th.

FACULTY—CONTINUED.

WOODVILLE LATHAM, JR.,
Prof. of Agriculture, Chemistry and Physics.

JAMES S. STEWART, M. S.,
Assistant in Preparatory Department.

JAMES McM. LEE, A. B.,
Major and Commandant of Cadets and Assistant in Preparatory Department.

J. C. SPRIGG, JR., SERG'T S. C. U. S. A.,*
Meteorological Observer and Instructor in Signaling and Telegraphy.

WM. DANCER, *Janitor.*

*JOHN B. MERRILL, SERG'T S. C. U. S. A., occupied this position during the Fall and Winter Terms.

Lectures.

HON. E. G. CRACRAFT,

"Master or Slave—Which?"

HON. JAMES MORROW, JR.,

"Money."

HON. GEO. H. MOFFETT,

"Defects in our American Educational System."

REV. P. B. REYNOLDS,

"Right and Expediency of Prohibitory Legislation."

Alumni.

1870.

Dent, Marmaduke H., A. M.

1871.

Dille, Oliver H., M. S.
Jolliffe, Wm. E., A. M.

1872.

Drabell, John H., A. M.
McLane, Allen E., A. M.
Smith, Benj. W., A. M.
White, I. C., A. M.

1873.

Babb, Chas. M., A. M.
Border, Daniel W., A. M.
Boughner, Wm. L., M. S.
Brown, James F., A. M.
Bullock, Edmund T., A. M.
Harris, John T., M. S.
Linch, George P., M. S.
McClure, Taylor B., M. S.
Price, Thomas H., M. S. M. D.
Pritchard, Wm. T., M. S.
Purinton, Daniel B., A. M.
Temple, Marcellus L., A. M.
Waters, James T., A. M.

1874.

*Chadwick, Richard V., A. M.
Dean, John S. W., A. M
Howell, Wm. M., A. M.
Jacobs, Thos. P., A. M.
Lynch, Chas. W., A. M.
Moran, Ellsworth E., A. M.
Woods, Frank, A. M.

1875.

Adams, Samuel Shugert, A. M.
Dolliver, R. H., A. M.
Dolliver, J. P., A. M.
Golden, Franklin A., B. S.
Martin, James V., A. M.
Peterson, J. J., A. M.
Purinton, A. L., A. M.

1876.

Anderson, John C., M. S.
Frasher, Luke H., A. M.
Hubbard, Harry Dana, M. S.
Ison, Willey Owens, A. M.
Kemp, Howard Mason, B. S.
Laidley, George Summers, M. S.
Nash, James Henry, M. S.
Ramage, Thomas C., M. S.
Wetzel, Daniel Elliot, A. M.

*Deceased.

1877.

Brown, William Gay, A. M.
Dille, Clarence B., A. M.
Hawthorne, Joseph H, A. M.
Hood, Thomas M., A. M.
Rogers, Daniel R., A. M.
Smith, Everett C., M. S.
Snively, Harry J., A. M.
Steele, John L., A. M.
Stewart, James S., M. S.

1878.

*Courtney, Alpheus F., B. S.
Dayton, Alston Gordon, A. B.
Lee, James McMillen, A. B.
Morgan, Benjamin S., A. B.
Marsh, Enoch Jasper, A. B.
Rich, Daniel, A. B.

1879.

Purinton, George Dana, A. B.
Rogers, William A., A. B.
Wade, Spencer S., B· S.

1880.

Grafton, Charles Edwin, B. S.
Keenan, B. L., B. S.
Marsh, John Nelson, A. B.
Pearre, Geo. A., Jr., A. B.
Waters, A. A., A. B.

*Deceased.

Undergraduates.

Seniors.

Hodges, Thos. E.....Class...French Creek, Upshur County.
Hyland, Wm. M.....Class...Oxon Hill, Prince George's Co., Md.
Ogden, Howard N..... ....Class...Fairmont, Marion County.

Juniors.

*Boyd, Thos. R..... ....Class...Galva, Ill.
*Brown, Zalmon Kent.....Class...Morgantown.
Courtney, David Hall..... Class...Randall, Monongalia County.
*Hodges, Theophilus E..... .....Class...Buckhannon, Upshur County.
*Jeffries, Elias D.....Class...Arbuckle, Mason County.
Lawhead, James Henry.....Sci.....Morgantown.
*Lewis, G. C.....Class...Clarksburg, Harrison County.
*Stewart, James Henry.....Class...Elsinore, Putnam County.

Sophomores.

Baker, George Coleman.....Class...Morgantown.
Berkeley, L. M.....Class...Morgantown.
Bland, William Thomas..... Sci.....Weston, Lewis County.
*Boyers, Luther M.....Class...Randall, Monongalia County.
Brown, Benjamin.....Class...Charleston.
Brown, S. B..... ....Class...Gladesville, Preston County.
*Glenn, Charles Fletcher.....Class...Morgantown.
Johnston, John L..... .... Sci.....Pentress, Monongalia County.
*Kelley, George Macklen.....Sci.....Morgantown.
Lazzell, Isaac Grant.....Class...Maidsville, Monongalia County.
*Morris, H. Perry.. ....Class...Morgantown.
Musgrave, John Edgar.....Sci.....West Columbia, Mason County.
*Patton, John.. .....Class...Romine's Mills, Harrison County.
*Russell, John Donley.....Class...St. Cloud, Monongalia County.
Wells, S. P., Jr..... .....Sci.....Parkersburg, Wood County.
*Williams, Benjamin G.....Sci.....Greensboro, Pa.

Class—Classical Course. Sci.—Scientific Course. *Conditioned.

Freshmen.

Anderson, Elisha Hoffman.....Class...Easton, Monongalia County.
*Armstrong, Robert.....Sci.....Armstrong's Landing, Putnam Co.
Berkeley, R. C., Jr.....Class...Morgantown.
*Brooke, Lee Davis.....Class...Helena, Montana Territory.
*Chapman, W. G., Jr.....Sci.....Warsaw, Indiana.
Cork, J. F.....Class...Clarksburg, Harrison County.
Foster, George Burman..... .....Class.. St. Alban's, Kanawha County.
Hare, Alfred Jarrett.....Class...Morgantown.
*Hood, Smith.....Class...Lowsville, Monongalia County.
*Holt, A. L..... .....Sci.....Glenville, Gilmer County.
*Knight, Lycurgus Newton.....Sci.....West Columbia, Mason County.
Mapel, Walter P.... .. ..Sci.....Rosedale, Greene County, Pa
McCutcheon, J. L.....Class...Cross Lanes, Nicholas County.
*McMillen, Edward Willie.....Class...Masontown, Preston County.
*Miller, O. M..... .....Class...Russellville, Fayette County.
*O'Brien, Daniel Ulysses.... .....Sci.....Weston, Lewis County.
*Purnell, Frank Morgan.....Class...Benwood.
*Reed, David K.....Class...Grafton, Taylor County.
Robinson, Harry Lee..... ...Class...Uniontown, Fayette County, Pa.

Optional Students.

Birch, Benj. F..... ...Greensboro, Greene County, Pa.
Cooper, Charles Nelson.....Bellville, Wood County.
Cox, A. L..... .....Fairmont.
Fast, R. E..... .....White Day, Monongalia County.
Hartigan, Jas. Wm.....Piedmont, Mineral County.
Haymond, Geo. H..... .....Morgantown.
Hough, Walter.....Morgantown.
Jamesson, H. P.....Piedmont, Mineral County.
Pearre, J. G.....Cumberland, Md.
Ramsey, Wm. H..... .....Huntington, Cabell County.
Smith, J. W.....Maidsville, Monongalia County.
Waters, Otis Watson.....Randall, Monongalia County.

Class—Classical Course. Sci.—Scientific Course. *Conditioned.

Professional Students.

Law Department.

Bedinger, Everett W.....Charlestown, Jefferson County.
Cox, A. L.....Fairmont.
Fast, R. E.....White Day, Monongalia County.
Houston, W. W.....Morgantown.
Hutchinson, Robert Lee Bruce.....Henderson, Mason County.
Jamesson, H. P.....Piedmont, Mineral County.
Kelley, Samuel C.....Morgantown.
Latham, Percy.....Morgantown.
Mapel, W. P.....Rosedale, Greene County, Pa.
Morgan, Benjamin S.....Morgantown.
Quenzel, Charles A. H.....Martinsburg, Berkeley County.

Medical Department.

Barker, Guy.....Cedar Valley, Monongalia County.
Birch, Benjamin F.....Greensboro, Greene County, Pa.
Cooper, Charles N.....Bellville, Wood County.
Gatewood, D. C.....Gladesville, Preston County.
Holt, A. L.....Glenville, Gilmer County.
Hood, Smith.....Lowsville, Monongalia County.
Jamesson, H. C.....Piedmont, Mineral County.
Musgrave, John E.....West Columbia, Mason County.
Wade, Spencer S.....Morgantown.

The above list includes only Medical Students proper.
The entire class consists of twenty-two members.

Preparatory Department.

FACULTY.

D. B. PURINTON, A. M., PRESIDENT.

Instructor in Vocal Music.

A. W. LORENTZ, A. M.,

Principal.

JAMES S. STEWART, M. S., SECRETARY,

Assistant.

JAMES McM. LEE, A. B.,

Major and Commandant of Cadets, and Assistant.

Preparatory Department.

Senior Year.

Adams, Nelson Daniel.....St. George, Tucker County.
Bailey, Robert McCandlish.....Weston, Lewis County.
Barb, Waitman T. Willey.....Laurel Point, Monongalia County.
Barker, Guy.....Cedar Valley, Monongalia County.
Boggess, Stanley Theodore.....Wilsonburg, Harrison County.
Boyers, Simon Leonard.....Randall, Monongalia County.
Bush, Asa Bee.....Tannersville, Gilmer County.
Casteel, Delphy Truman Ellsworth.....Oakland, Md.
Conley, Henry Carrell.....Piedmont, Mineral County.
Davies, Samuel Edward.....Letart, Mason County.
Davis, George Warren.....DeKalb, Gilmer County.
Edwards, John Henry.....East Liberty, Fayette County, Pa.
Everett, Dick F.....Connellsville, Pa.
Fleming, Harvey.....Auburn, Ritchie County.
Gaines, Nathaniel West.....Fayetteville, Fayette County.
Gaines, Joseph Holt.....Fayetteville, Fayette County.
Hagans, William Henry.....Brandonville, Preston County.
Hart, William Hampton.....Maidsville, Monongalia County.
Harris, Floyd Walter.....Meadowville, Barbour County.
Hays, Samuel Augustus.....Glenville, Gilmer County.
Hurst, Nathaniel G.....Uniontown, Fayette County, Pa.
Hutchinson, Robert Lee Bruce.....Henderson, Mason County.
Jamesson, Harper C.....Piedmont, Mineral County.
Kitsmiller, Lewis.....Knotsville, Taylor County.
McDaniel, William Harrison.....Thornton, Taylor County.
Michael, Walter Howard.....Bruceton Mills, Preston County.
Michael, James Clark.....Bruceton Mills, Preston County.
Nutter, Melvin D.....Elk City, Barbour County.
Poling, Francis Asbury.....Philippi, Barbour County.
Quenzell, Charles Albert Henry.....Martinsburg, Berkeley County.
Ralphsnyder, George McClellan.....Arnettsville, Monongalia County.
Rohrbough, Irvin McNulty.....Buckhannon, Upshur County.
Snodgrass, Elisha McClellan.....Auburn, Ritchie County.
Sweeney, John David.....Centerville, Tyler County.
Tapp, Robert W.....Morgantown.
Taylor, James Summerfield.....Romney, Hampshire County.
White, Thomas Lincoln.....Rock Lick, Marshall County.
Wilson, John Franklin.....Grafton, Taylor County.
Yokum, Humbolt.....Beverly, Randolph County.

Junior Year.

Alkire, Lee.....Jane Lew, Lewis County.
Allen, Robert John Franklin.....Volcano, Wood County.
Ashby, Samuel Turner.....Grafton, Taylor County.
Bainbridge, Andrew Morgan.....Irontown, Taylor County.
Barker, Alfred Sidney.....Cedar Valley, Monongalia County.
Basnett, Willie Ray.....Fairmont, Marion County.
Beall, William Ryland.....Cumberland, Md.
Berkshire, Charles Pennington.....Morgantown.
Brand, Harvey.....Cassville, Monongalia County.
Breakiron, Charles Luther.....Morgantown.
Breakiron, Mortimer Delvile.....Morgantown.
Brown, Cassius Clay.....Andy, Monongalia County.
Chalfan, Solomon Elijah.....Pentress, Monongalia County.
Dean, Clark.....Maidsville, Monongalia County.
Eakin, Clement Levier.....Wadestown, Monongalia County.
Fleming, Melville Hynson.....Cassville, Monongalia County.
Forbes, William Houser.....Wheeling.
Garlow, Madison Taswell.....Bunner's Ridge, Marion County.
Gorman, James G.....Morgantown.
Graham, John William.....Ripley, Jackson County.
Hall, Joseph Milton.....Laurel Point, Monongalia Co.
Hall, Clark Bare.....Mt. Morris, Greene County, Pa.
Harmison, Charles Chilton.....Romney, Hampshire County.
Hayes, Henry Herbert.....Morgantown.
Hollingsworth, Henry Sharp.....Volcano, Wood County.
Hutchinson, Clyde Effington.....White Day, Monongalia County.
Kendall, William Alpheus.....Harrisville, Ritchie County.
Kile, David Washington.....Upper Tract, Pendleton County.
Lawlis, James Lisbon.....Cassville, Monongalia County.
Long, Charley Kenton.....Scarry, Putnam County.
Lupton, Charles H.....Romney, Hampshire County.
Moore, John Franklin.....Uniontown, Fayette County, Pa.
Pell, Millard.....Masontown, Preston County
Pickens, Dever.....Overfield, Barbour County.
Posten, Smith Judson.....Masontown, Preston County.
Price, Richard Brown.....Mooresville, Monongalia County.
Protzman, Spurgeon Holmes.....Morgantown.
Ralphsnyder, William Marmaduke.....Arnettsville, Monongalia County.
Shaw, Henry Clay.....Barton, Md.
Sisler, John Lot.....Stewarttown, Monongalia County.
Sites, Johnson McKee.....Upper Tract, Pendleton County.
Snider, Frank.....Easton, Monongalia County.
St. Clair, Leroy Kramer.....Easton, Monongalia County.
Stoneking, James Lindsay.....Rosedale, Greene County, Pa.
Stewart, Elliott Simpson.....Easton, Monongalia County.

JUNIOR YEAR—Continued.

Stewart, Robert Augustus L. S. ....Elsinore, Putnam County.
Stewart, Benjamin Willey.....Cedar Valley, Monongalia County.
Talbott, Ealem D., Jr.....Philippi. Barbour County.
Talbott, John Lawrence..... .....Philippi, Barbour County.
Tennant, Luther..... .....Miracle Run, Monongalia County.
Tharp, George Washington... ....Holbrook, Ritchie County.
Thomas, Jeremiah..... .....Clifton Mills, Preston County.
Thrash, John Nathan.....Elk City, Barbour County.
White, George.....Rock Lick, Marshall County.
Williams, John Franklin.....Greensboro, Greene County, Pa.
Woodford, John Howe..... .....Weston, Lewis County.
Woodruff, Frank Elias.....Majorsville, Marshall County.
Young, John Albert..... .....Mason City, Mason County.

Recapitulation.

Seniors	3
Juniors	8
Sophomores	16
Freshmen	19
Optional Students	12
Law Students	11
Medical Students	9
Senior Preparatory Students	39
Junior Preparatory Students	58
Grand Total	175
Deduct for those counted more than once	13
Total	162

Recapitulation by Counties in West Virginia.

Barbour County	7
Berkeley County	1
Cabell County	1
Fayette County	3
Gilmer County	4
Hampshire County	3
Harrison County	4
Jackson County	1
Jefferson County	1
Kanawha County	2
Lewis County	5
Marshall County	3
Marion County	4
Mason County	6
Mineral County	4
Monongalia County	56
Nicholas County	1
Ohio County	2
Pendleton County	2
Preston County	9

RECAPITULATION—Continued.

Putnam County	4
Randolph County	1
Ritchie County	3
Taylor County	7
Tucker County	1
Tyler County	1
Upshur County	3
Wood County	4
Total	143

Recapitulation by States.

West Virginia	143
Pennsylvania	11
Maryland	5
Indiana	1
Illinois	1
Montana Territory	1
Total	162

The following is an exhibit of the number of students enrolled annually from the beginning:

The year 1867–8, shows a total of 124.
The year 1868–9, shows a total of 154.
The year 1869–70, shows a total of 161.
The year 1870–1, shows a total of 166
The year 1871–2, shows a total of 159.
The year 1872–3, shows a total of 144.
The year 1873–4, shows a total of 138.
The year 1874–5, shows a total of 125.
The year 1875–6, shows a total of 96.
The year 1876–7, shows a total of 93.
The year 1877–8, shows a total of 118.
The year 1878–9, shows a total of 135.
The year 1879–80, shows a total of 132.
The present year, 1880–1, shows a total of 162.

Military Department.

FACULTY.

D. B. PURINTON, A. M.,
President.

JAS. McM. LEE, A. B.,
Major and Commandant.

Roster of Cadet Officers.

BATTALION STAFF.

CADET WM. M. HYLAND, - - -	Adjutant.
CADET JAS. H. LAWHEAD, - - -	Sergeant Major.

ORDNANCE DEPARTMENT.

CADET T. E. HODGES, - - -	Captain of Artillery.
CADET E. DICK JEFFRIES, - - -	Chief of Ordnance.

COLOR GUARD.

CADET D. U. O'BRIEN, - - -	Sergeant.
CADET ROBERT ARMSTRONG, - -	First Corporal.
CADET J. E. MUSGRAVE, - - -	Second Corporal.
CADET L. N. KNIGHT, - - - -	Third Corporal.

Company Officers.

COMPANY "A."

CADET JAS. H. STEWART,	Captain.
CADET D. H. COURTNEY,	First Lieutenant.
CADET F. M. PURNELL,	Second Lieutenant.

NON-COMMISSIONED OFFICERS.

CADET GEO. C. BAKER,	First Sergeant.
CADET S. P. WELLS, JR.,	Second Sergeant.
CADET JOHN L. JOHNSTON,	Third Sergeant.
CADET JOHN PATTON,	First Corporal.
CADET J. C. LAZZELL,	Second Corporal.
CADET J. W. HARTIGAN,	Third Corporal.
CADET J. M. ROHRBOUGH,	Fourth Corporal.

COMPANY "B."

CADET THOS. E. HODGES,	Captain.
CADET E. DICK JEFFRIES,	First Lieutenant.
CADET H. N. OGDEN,	Second Lieutenant.

NON-COMMISSIONED OFFICERS.

CADET G. C. LEWIS,	First Sergeant.
CADET W. T. BLAND,	Second Sergeant.
CADET BENJ. BROWN,	Third Sergeant.
CADET C. N. COOPER,	First Corporal.
CADET W. H. HAGANS,	Second Corporal.
CADET J. D. SWEENEY,	Third Corporal.
CADET D. T. E. CASTEEL,	Fourth Corporal.

MARKERS.

COMPANY "A,"	J. H. Woodford.
COMPANY "B,"	J. A. Young.

DRUM CORPS.

CADET JOHN G. SAMPSEL,	First Trumpeter.
CADET CHAS. F. GLENN,	Second Trumpeter.
CADET B. F. BIRCH,	First Tenor Drummer.
CADET H. H. HAYES,	Second Tenor Drummer.
CADET S. T. BOGGESS,	Bass Drummer.

Roster of State Cadets.

No. of District.	Name.	Status.	Enlisted or Discharged.
I.	Grafton, Charles E.	Graduated	June 10, 1880.
	Brown, Samuel B	Present	Sept. 19, 1879.
	Lewis, George C	Present	Sept. 4, 1877.
	White, Thomas L	Present	Sept. 1, 1880.
	Alkire, Lee	Present	Sept. 20, 1880.
	Adams, N. D	Present	March 8, 1881.
II.	Cox, A. L	Present	Sept. 4, 1877.
	Ogden, H N	Present	Oct. 2, 1878.
	Hagans, Wm. H	Present	Oct. 17, 1879.
	Basnett, Wm. R	Present	Sept. 3, 1880.
	Garlow, M. T.	Present	Sept. 1, 1880.
III.	Snodgrass, C. N	Honorably discharged	Sept. 20, 1880.
	Holt, A. L	Present	Sept. 26, 1879.
	Cork, Jacob	Present	Oct. 10, 1879.
	Fleming, Harvey	Present	March 31, 1880.
	Patton, John	Present	Oct. 25, 1878.
	Snodgrass, E. M	Present	Oct. 4, 1880.
IV.	Hyland, Wm. M	Present	Sept. 14, 1877.
	Sweeney, John D	Present	March 31, 1880.
	Hollingsworth, H. S	Present	Sept. 1, 1880.
	Vacancy		
	Vacancy		
V.	Cargill, Sam. G	Honorably discharged	Sept. —, 1880.
	Armstrong, Robert	Present	April 11, 1879.
	Knight, L. N	Present	Sept. 26, 1879.
	Hutchinson, R. L. B	Present	Sept. 17, 1880.
	Young, John A	Present	Jan. 15, 1881.
	Vacancy		
VI.	Jeffries, E. D	Present	March 30, 1877.
	Stewart, James H	Present	Sept. 20, 1878.
	Musgrave, John E	Present	April 11, 1879.
	Johnston, John L	Present	April 11, 1879.
	Hays, Samuel A	Present	Dec. 4, 1880.

ROSTER OF STATE CADETS—Continued.

No. of District.	Names.	Status.	Enlisted or Discharged.
VII.	Keenan, Bruce L.	Graduated	June 10, 1880.
	Donally, Charles H.	Honorably discharged	Sept. 21, 1880.
	Ramsey, Wm. H.	Absent on furlough	March 31, 1880.
	Stewart, Robert A.	Present	Sept. 9, 1880.
	Gaines, J. H.	Present	Sept. 10, 1880.
	Bainbridge, A. M.	Present	Sept. 1, 1880.
	Poling, F. A.	Present	Sept. 30, 1880
VIII.	Baker, George C.	Present	March 8, 1878.
	Brown, Benjamin	Present	Sept. 12, 1879.
	Bland, Wm. T.	Present	Oct. 10, 1879.
	Anderson, E. H.	Present	Sept. 1, 1880.
	Gaines, N. W.	Present	Sept. 6, 1880.
IX.	Hodges, T. E.	Present	Sept. 14, 1877.
	O'Brien, D. U.	Present	Sept. 19, 1879.
	Rohrbough, I. M.	Present	Sept. 1, 1880.
	Yokum, H.	Present	Sept. 2, 1880.
	Harris, F. W.	Present	March 8, 1881.
X.	Courtney, D. H.	Present	Sept. 14, 1877.
	Lawhead, James H.	Present	Sept. 12, 1879.
	McMillen, E. W.	Present	Sept. 26, 1879.
	Lazzell, I. G.	Present	Jan. 9, 1880.
	Tapp, R. W.	Present	March 31, 1880.
XI.	Nefflen, Paul H.	Honorably discharged	Sept. —, 1880.
	Conley, H. C.	Present	Sept. 12, 1879.
	Hartigan, J. W.	Present	Sept. 12, 1879.
	Kile, D. W.	Present	Sept. 1, 1880.
	Tharp, G. W.	Present	March 9, 1881.
	Sites, J. M.	Present	Jan. 7, 1881.
XII.	Marsh, J. N.	Graduated	June 10, 1880.
	Bailey, R. M.	Present	March 31, 1880.
	Woodford, J. H.	Present	Sept. 1, 1880.
	Talbot, E. D	Present	Sept. 21, 1880.
	Quenzell, Charles	Honorably discharged	Jan. —, 1881
	Kitsmiller, L	Present	April 11, 1880.
	Ashby, Samuel T.	Present	March 15, 1881.

Roster of Volunteer Cadets.

Name.	Status.	Enlisted or Discharged.
Purnell, F. M.	Present	Oct. 15, 1878.
Cooper, C. N.	Present	Sept. 19, 1879.
Wells, S. P., Jr.	Present	Sept. 19, 1879.
Hurst, N. G.	Present	Sept. 19, 1879.
Casteel, D. T. E.	Present	Sept. 1, 1880.
Robinson, H. L.	Present	Sept. 1, 1880.
Mapel, R. L.	Honorably discharged	April 6, 1881.
Reed, D. K.	Present	Oct. 12, 1880.
Chapman, W. G.	Present	Nov. 4, 1880.
Beall, W. R.	Present	Jan 10, 1881.
Pickens, Dever	Present	March 10, 1881.
Moore, John F.	Present	March 15, 1881.
Nutter, M. D.	Present	March 24, 1881.
Pearre, J. G.	Discharged	Oct. 12, 1880.
Everett, D. F.	Resigned	Nov. 4 1880.
Sampsel, John	Present	Feb 21, 1881.
Birch, B. F	Present	Feb 21, 1881.
Hayes, H. A.	Present	Feb. 21, 1881.
Boggess, S. T.	Present	Feb. 21, 1881.
Glenn, Charles	Absent on leave	Feb 21, 1881.

RECAPITULATION.

Captains	2
Lieutenants	5
Sergeants	8
Corporals	11
Musicians	5
Privates—Regulars	44
Privates—Volunteers	16
Total	91
Counted twice or absent	19
Total on roll, April 1881	72

Distinguished Cadets, 1879-80.*

Names.	Military.	Course.
C. E. Grafton	Military	Scientific.
J. N. Marsh	Military	
George A. Pearre	Military	Classical.
A. L. Cox	Military	
T. E. Hodges	Military	Classical.
W. M. Hyland		Classical.
E. D. Jeffries	Military	Classical.
W. T. Bland	Military	
Benjamin Brown	Military	Classical.
S. B. Brown	Military	
J. L. Johnston	Military	
J. E. Musgrave	Military	
S. P. Wells, Jr	Military	
R. A. Armstrong	Military	Preparatory.
S. G. Cargill	Military	Preparatory.
C. N. Cooper	Military	
J. Cork		Preparatory.
J. W. Hartigan		Preparatory.
D. U. O'Brien	Military	
F. M. Purnell	Military	
C. N. Snodgrass		Preparatory.

*In accordance with the established custom Cadets are reported as distinguished in the departments opposite their names, by reason of having attained a yearly standing of 9 or upwards on a scale of 10.

Vocal Music.

D. B. PURINTON, A. M., INSTRUCTOR.

Some years ago, the Regents added Vocal Music to the Studies of the University. It is open, free of charge, to the students of all departments alike. The course of instruction embraces one year, as follows:

FALL TERM—Rudiments and Elemenary Practice.

WINTER TERM—Rudiments continued. Glee and Chorus Singing.

SPRING TERM—Lectures on Harmony and Composition, Chorus Singing, Review, &c.

Students.

Adams, N. D.
Bambridge, A. M.
Barb, W. T. W.
Boggess, S. T.
Boyers, S. L.
Brown, B.
Bush, A. B.
Casteel, D. T. E.
Chapman, W. G.
Davies, S. E.
Davis, G W.
Eakin, C. L.
Edwards, J. H.
Fleming, H.
Fleming, M. H.
Foster, G. B.
Garlow, M. T.
Graham, J. W.
Hartigan, J. W.
Hutchinson, R. L. B.
Kendall, W. A.
Kelley, G. M.
Knight, L. M.
Miller, O. M.
McCutcheon, J. L.
McDaniel, W, H.
Nutter, M. D.
O'Brien, D. U.
Ogden, H. N.
Poling, F. A.
Price, R. B.
Robinson, H. L.
Rohrbough, I. M.
Sisler, J. L.
Sites, J. M.
Snodgrass, E. M.
Stewart, W. B.
Sweeney, J. D.
Talbot, E. D.
Tennant, L.

Course of Study.

The instruction thus far provided for in the University is embraced in six departments, viz: The Classical, Scientific, Agricultural, Engineering, Military: and for those desiring to qualify themselves for regular admission to any of these, a Preparatory Department. No study has been dropped from any of these Departments, but the method of stating what is required in each has been simplified in the present Catalogue.

I.

Classical Department.

The studies in this Department, required for the degree of Rachelor of Arts, are as follows:

Freshman Year.

FIRST TERM.

Virgil—Bucolics and Georgics; Prose Composition. Gildersleeve's Grammar and Exercise Book.
Herodotus—Greek Prose Composition and Greek Grammar.
Universal History—Anderson.
University Algebra—Robinson.
Elocution.

SECOND TERM.

Horace—Odes and Epodes; Latin Prose Composition (continued), and Grammar.
Homer—Iliad; Greek Prose Composition (continued), and Grammar.
English Literature—Shaw.
Geometry (completed): Solid and Plane Trigonometry (commenced).
Elocution.

THIRD TERM.

Cicero—De Senectute and De Amicitia; Exercises in Latin Prose Composition and Grammar.
Homer—Odyssey; Prose Compostion. Grammar.
Constitution of the United States and of West Virginia.
Plane Trigonometry (completed); Spherial Geometry and Trigonometry.
Elocution.

Sophomore Year

FIRST TERM.

Xenophon—Memorabilia; Exercises in Greek Composition and Grammar.
Rhetoric—Hill.
Mensuration; Surveying; Navigation.
Chemistry—Roscoe and Tilden's Introduction to Chemical Philosophy.
Elocution.

SECOND TERM.

Horace—Satires and Epistles; Exercises in Latin Composition and Grammar.
Comparative Philology.
Analytical Geometry and Differential Calculus—Loomis.
Chemistry—Roscoe and Tilden's Introduction to Chemical Philosophy.
Elocution.

THIRD TERM.

Livy—Lincoln; Exercises in Latin Composition and Grammar.
Plato—Crito and Apology; Exercises in Greek Composition and Grammar.
Botany—Gray.
Integral Calculus—Loomis. (Optional).
Elocution.

Junior Year.

FIRST TERM.

Euripides' Alcestis; or French.
Mental Philosophy; The Intellect—Haven and Lectures.
Physics—Balfour Stewart's Lessons on Elementary Physics, and Thomson and Tait's Elements of Natural Philosophy.
Physical Geography (Geikie).

SECOND TERM.

Anatomy, Physiology and Hygiene, by Lectures.
Tacitus—Germania and Agricola; Latin Composition; or French.
Mental Philosophy; The Sensibilities and the Will—Haven and Lectures.
Physics Pneumatics, Acoustics and Optics.
Zoology—Packard.

THIRD TERM.

Demosthenes on the Crown, with Written Exercises; or French.
Logic—Coppee.
Human Anatomy, Physiology and Hygiene, by Lectures.

Senior Year.

FIRST TERM.

Cicero—De Officiis; with Written Exercises on Historical Subjects; or German.
Moral Philosophy—Wayland.
History of Civilization—Guizot.
Geology, Lithological, Dynamical and Historical—LeConte, with Geological Excursions.

SECOND TERM.

Sophocles—Œdipus Tyrannus; or German.
Elements of Criticism—Lord Kames.
Astronomy—Newcomb and Holden.
International Law—Woolsey.

THIRD TERM.

Political Economy—Chapin's Wayland.
Tacitus—Annals; or German.
Astronomy (completed).
Evidences of Christianity—Alexander's.

If, in this Department, the student selects the French or German instead of the Latin or Greek, he shall be required to study them respectively, during three successive terms, and such selection must be made at the beginning of the Junior or Senior year. The text books for the Junior Year are the same as those of the Scientific Freshman, and for the Senior Year, the same as Junior Scientific.

II.

SCIENTIFIC DEPARTMENT.

The studies in this Department required for the Degree of Bachelor of Science are the following:

Freshman Year.

FIRST TERM.

University Algebra—Robinson.
French—Languellier and Monsanto's or Fasquelle's Course.
Universal History—Anderson.
Chemistry—Roscoe's Lessons in Elementary Chemistry and Tilden's Introduction to Chemical Philosophy.
Elocution.

SECOND TERM.

Geometry (completed), Solid and Plane Trigonometry (commenced).
French—French Course (continued); French Reader.
English Literature—Shaw.
Chemistry—Roscoe's Lessons in Elementary Chemistry and Tilden's Introduction to Chemical Philosophy.
Elocution.

THIRD TERM.

Plane Trigonometry (completed)—Spherial Geometry and Trigonometry.
French—French Course (completed); French Reader; Telemaque (Surenne's).
Constitution of the United States.
Botany—Gray's School and Field Book.
Elocution.

Sophomore Year.

FIRST TERM.

Mensuration; Surveying and Navigation—Robinson.
French—Voltaire, Charles XII., French Grammar and Exercises.
Rhetoric—Hill.
Physics—Balfour Stewart's Lessons in Elementary Physics and Thomson and Tait's Elements of Natural Philosophy.
Elocution.

SECOND TERM.

Analytical Geometry, and Differential Calculus—Loomis.
French, Classical Plays—Joynes; Grammar and Exercises.
*Chemical Analysis—Tilden's Practical Chemistry.
Physics - Undulations, Acoustics, Optics, Problems.
Elocution.

THIRD TERM.

Agriculture.
Integral Calculus - Loomis.
French (Optional)—Pylodet's Classical Literature.
*Chemical Analysis—Tilden's Practical Chemistry.
Elocution.

Junior Year.

FIRST TERM.

Meteorology.
German—Woodbury's Course or Method.
Mental Philosophy, The Intellect—Haven and Lectures.
Physical Geography—Geikie.

SECOND TERM.

Anatomy, Physiology and Hygiene, by Lectures.
Analytical Mechanics—Peck.
German—Grammar (continued); German Reader.
Zoology—Packard.
Mental Philosophy—The Sensibilities and the Will—Haven and Lectures.

THIRD TERM.

Mineralogy—Dana's Manual.
German—Grammar and Free Exercises; Schiller's Jungfrau or Maria Stuart.
Logic—Coppee.
Anatomy, Physiology and Hygiene, by Lectures—Human.

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*Books of reference, Fleischer's Volumetric Analysis, Tresenius.

Senior Year.

FIRST TERM.

Moral Philosophy—Wayland.
German—Goethe's Iphigenia in Tauris, or Egmont: Grammar and Exercises.
History of Civilization—Guizot.
Geology—Lithological, Dynamical and Historical—LeConte, with Geological Excursions.

SECOND TERM.

International Law—Woolsey. Goethe's Hermann und Dorothea.
German—Fouque's Undine: or Grammar and Exercises.
Elements of Criticism—Lord Kames.
Astronomy—Descriptive and Physical.

THIRD TERM.

Evidences of Christianity—Alexander's.
Political Economy—Chapin's Wayland.
German—(Optional) Evans' German Literature: Grammar and Exercises.
Practical Astronomy—Calculation and Construction of Eclipses, verified by the Nautical Almanac.
Geology—LeConte.

III.

Department of Engineering.

The studies in this Department for the first, second and third years are the same as in the Scientific Course. For the Senior year they are as follows:

FIRST TERM.

Civil Engineering—Mahan.
Moral Philosophy—Wayland.
Physical Geography—Geikie.
Geology—Lithological, Historical and Dynamical—LeConte, with Geological Excursions.

SECOND TERM.

Military Engineering—Mahan.
Astronomy—Descriptive and Physical.
International Law—Woolsey.
Elements of Criticism—Kames.

THIRD TERM.

Gillespie on Location, Construction and Improvement of Roads and Railroads.
Astronomy—Practical.
Evidences of Christianity—Alexander's.

The studies of the Modern Languages are the same as in the Scientific Course.

IV.

MILITARY DEPARTMENT.

In addition to the daily drills as Infantry or Artillery, the Cadets are theoretically instructed in Military Science, as follows:

FIRST YEAR.

FIRST TERM—Infantry Tactics; School of the Soldier; School of the Company.
SECOND TERM—Instruction for Skirmishers: Battalion Drill.
THIRD TERM—Military Signaling—(Myer's).

SECOND YEAR.

FIRST TERM—
SECOND TERM—Military History.
THIRD TERM—Artillery Tactics.

THIRD YEAR.

FIRST TERM—Artillery Tactics, (concluded).
SECOND TERM—Military Engineering (Mahan's); Field Fortifications (Mahan's).
THIRD TERM—Advance Guard and Outpost Duty—(Mahan's).

FOURTH YEAR.

FIRST TERM—
SECOND TERM—Ordnance and Gunnery—(Benton's).
THIRD TERM—Military Law and Courts Martial—(Benits).

The above course is seldom taken in full, but officers of the Corps are required to study and undergo examination upon Military Engineering, Field Fortification, Advance Guard and Outpost Duty, and Military Law and Courts-Martial.

The annual course in drill for the entire corps is as follows:

FIRST TERM—Schools of the Soldier, Company and Battalion, including Bayonet Exercises, Skirmish Drill and Target Practice.
SECOND TERM—Artillery—Manual of the Piece and Sabre Exercise.
THIRD TERM—Artillery—School of the Battery Dismounted; Guard Duty; Courts-Martial.

Dress Parades, Reviews, Inspections, and Guard Mountings, are held at least once a week.

The other studies in this Department, are those of the Classical or the Scientific Departments respectively.

V.

AGRICULTURAL DEPARTMENT,

The studies in this Department are, at present, embraced in a two years' course. Students having creditably completed this course, will be entitled to receive a certificate to that effect.

First Year.

FIRST TERM.

Inorganic Chemistry.
Physics—Balfour Stewart's Lessons in Elementary Physics, and Thomson and Tait's Elements of Natural Philosophy.
General History.
French or German (Optional).

SECOND TERM.

Chemistry; Zoology.
English Literature.
French or German (Optional).

THIRD TERM.

Botany and Vegetable Physiology.
Physics.
Plane Trigonometry.
Constitution of the United States and of West Virginia.

Second Year.

FIRST TERM.

Analytical Chemistry, Geology, Meteorology.
Chain and Compass Surveying.

SECOND TERM.

Chemical Analysis; Entomology.
Astronomy.
French or German (Optional).

THIRD TERM.

How Crops Feed and How Crops Grow—Johnson.
Gillespie, on Roads and Road Making.
Political Economy.
Evidences of Christianity; Alexander's.
Appropriate Lectures on Correlated Subjects will be given throughout the course.

LAW DEPARTMENT.

TUITION FEE $10

The full course will embrace Common and Statute Law, Mercantile Law, Equity and Evidence, and Constitutional and International Law.

The text-books used in the course of Common and Statute Law will be Blackstone's Commentaries, Stephen on Pleading, 4th Volume of Kent's Commentaries (Real Property), and for *reference* the Code of West Virginia and the subsequent Acts of the West Virginia Legislature.

In the branch of Equity, Evidence and Mercantile Law, the books will be Adams's Equity, the 1st Volume of Greenleaf on Evidence and Smith's Mercantile Law.

These text-books will be supplemented by at least four lectures each week, and it will be the endeavor so to incorporate into these lectures the statutory changes in the Common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-book used in Constitutional Law will be the "Federalist." This, however, will be supplemented by lectures upon our Constitutional History from the Colonial period, through the Continental and Confederation eras successively to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions will also be the subject of lectures.

The text-book used in International Law will be Woolsey's Introduction to the Study of International Law. Each day before the lecture there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the text-book as were the subject of the lecture. Besides the daily examinations there will be two general examinations. One of these will be held in the latter part of February, and the other in the last of May. The intermediate one in February will embrace that part of the course which was gone over up to that time, and the final one that part which was passed over from February to May. They will both be conducted in writing, and the questions will have numerical values attached to each Certificates of distinction will be awarded at the end of the session to those students whose answers in the general examination shall aggregate three-fourths of the aggregate values attached to the questions, and whose answers in the daily oral examinations shall have been uniformly good. Care will be taken that these certificates shall be awarded only to those who have been habitually studious, and have made steady progress in the acquisition of the fundamental principles of their profession.

It is believed that the holder of one of these certificates will have no trouble in passing an examination by the Judges for admission to the bar of any State in the Union.

As the Common and Statute Law, Equity, Evidence and Mercantile Law will constitute that portion of the whole course for which the practitioner will

have daily use, the certificates will be given for proficiency in those branches only.

Constitutional and International Law are parts of the regular curriculum, and students attending the University for the purpose of becoming practitioners will not be required to take the Constitutional and International Course.

MEDICAL DEPARTMENT.

The Board of Regents, at its annual meeting in June, 1878, established a Chair of Anatomy, Physiology and Hygiene, and elected as Professor in this Department, HUGH W. BROCK, M. D., of Morgantown, whose Course of Instruction, it was enacted, should occupy two of the three terms of the University year.

This chair was designed by the Board to teach the Students of the University a more accurate and thorough knowledge of the structure and organization of the human body and of the laws of health than is ordinarily taught in the usual college courses.

It was designed also to serve as a *nucleus* around which, it is hoped, a fully organized Medical Department, in connection with the University, will at no distant day be established.

Pursuant to this action of the Board, Dr. Brock entered upon his duties at the beginning of the Spring term of 1879, since which time he has lectured on Anatomy, Physiology and Hygiene, illustrating his oral instructions by diagrams upon the blackboard, by Anatomical plates, by Anatomical preparations wet and dry, and by dissections upon the dead body made by himself either in the presence of the class or immediately before each lecture. Endeavoring to carry out the object of the Board, he has, in addition to his daily lectures upon Descriptive Anatomy, taught much of Morbid and Surgical Anatomy, explaining the different forms of disease to which each organ is liable, demonstrating upon the subject the various important Surgical Regions of the body, and, in connection therewith performing upon the cadaver, in presence of the class, most of the recognized operations in Surgery, such as lithotomy, herniotomy, tracheotomy, division of tendons for the relief of strabismus and club-foot, amputations, resections, ligation of arteries, etc.

Minute Anatomy has been taught by the use of the microscope.

The Anatomical elements of the solid tissues and fluids of the body, as also many interesting and beautiful physiological phenomena such as the circulation of the blood in the frog's foot and ciliary motion as exhibited by the spermatazoa, epithelium from the frog's mouth, the Fresh Water Mussel and many different forms of Infusoria have been shown the class under the microscope.

In cases where it was practicable to do so patients from private practice have been brought before the class, examined and prescribed for and clinical lectures delivered upon the diseases with which the patients were afflicted. Several important Surgical operations upon private patients have been performed before the class.

The method of examining the urine and other fluids of the body in a state of disease as well as of health have been taught, chemically and microscopically.

In the lectures upon Physiology and Hygiene the means of preserving each organ and the body as a whole in a state of health have been impressed upon the mind of the student.

The interest taken by the members of the class in the studies of this Department of the University, as manifested by their punctual attendance upon and close attention to the lectures, and also by their evident comprehension of the instruction imparted, as evinced by the daily examinations to which they are subjected upon the topics of the previous lecture, has been highly gratifying to their Instructor and has fully vendicated the wisdom of the Board of Regents in establishing this Department of the University.

The class composing the Medical Department is made up as follows:

First—Of Members of the Junior Class who are required to take Anatomy and Physiology, in course, during the Junior Year.

Secondly—Of such State Cadets as elect to take the Course in this Department and who are recommended by the Faculty as qualified by preparatory study to do so.

Thirdly—Of Medical Students, proper, whether or not they be students in any other Department of the University.

Neither Juniors nor Cadets are required to pay any additional fee to that already paid as regular students of the University.

All others are required to pay a fee of ten dollars for admission to the Lectures.

For such Students of Medicine who, on account of limited means or time, are not prepared to take a full College Course but who desire to take, in connection with Medicine, studies in other departments of the University which are germane to and essentially necessary to an intelligent study of Medicine as a Science, for example, an Elementary Course in Latin and Greek and a Course in Chemistry, special and favorable provision will be made.

The Course of Instruction in this Department commences with the beginning of the Winter Term, November 23, and continues to the close of the University year in June.

Arrangements have been made for a supply of Anatomical Material, so that all Medical Students of the University will have ample facilities for the study of Human Anatomy by means of dissections made with their own hands.

SCHEDULE OF DAILY RECITATIONS.

FIRST TERM.

	Class.	First Hour.	Second Hour	Third Hour.	Fourth Hour.	Fifth Hour.
Classical.	Senior	Geology.	Moral Science.	Civilization.	Latin or German.	
	Junior	French or Greek.	Physical Geography.	Mental Philosophy.	Physics.	
	Sophomore	Rhetoric.	Surveying.	Chemistry.	Greek	Elocution.
	Freshman	Greek.	History.	Latin.	Algebra.	Elocution.
Scientific.	Senior	Geology.	Moral Science.	Civilization.		German.
	Junior	Meteorology.	Physical Geography.	Mental Philosophy.	German.	
	Sophomore	Rhetoric.	Surveying.	French	Physics.	Elocution.
	Freshman	French.	History.	Chemistry.	Algebra.	Elocution.

SECOND TERM.

Classical.	Senior	International Law.	Astronomy.	Greek or German.	Elements of Criticism.	
	Junior	French or Latin.	Mental Philosophy.	Physics.	Zoology.	
	Sophomore	English Philology.	Analytical Geometry.	Latin.	Chemistry.	Elocution.
	Freshman	Greek.	English Literature.	Geometry.	Latin.	Elocution,
Scientific.	Senior	International Law.	Astronomy.		Element- of Criticism.	German.
	Junior	Analytical Mechanics.	Mental Philosophy.	German.	Zoology.	
	Sophomore	Chemical Analysis.	Analytical Geometry.	Physics	French.	Elocution.
	Freshman	French.	English Literature.	Geometry.	Chemistry.	Elocution.

THIRD TERM.

Classical.	Senior	Ev. Christianity.	Astronomy.	Latin or German.	Political Economy.	
	Junior	Logic.	Greek or French.		Anatomy.	
	Sophomore	Botany.	Calculus (opt.)	Latin.	Greek.	Elocution.
	Freshman	Latin.	Greek	Constitution.	Trigonometry.	Elocution.
Scientific.	Senior	Ev. Christianity.	Astronomy.	Geology.	Political Economy.	
	Junior	Logic.	Mineralogy.	German.	Anatomy.	
	Sophomore	Chem. Analysis.	Calculus.		Agriculture.	Elocution.
	Freshman	Botany.	French.	Constitution.	Trigonometry.	Elocution.

PREPARATORY DEPARTMENT.

Junior Year.

FIRST TERM.

Geography—Guyot's Common School; Map Drawing
Arithmetic—Stoddard's Complete.
English Grammar—Etymology.
Latin (commenced).

SECOND TERM.

Geography—Guyot's (continued): Map Drawing.
Arithmetic (continued).
English Grammar—Syntax and English Composition.
Latin—Grammar and Reader.

THIRD TERM.

Arithmetic (completed).
English Grammar—Analysis, Prosody, and English Composition.
Latin—Grammar and Readers.
Greek—Bullion's First Lessons.

Senior Year.

FIRST TERM.

Algebra—Robinson's Elementary, to Involution.
Book-keeping.
Cæsar (two books(—Latin Grammar.
Greek—Grammar and Reader.

SECOND TERM.

Algebra—Robinson's Elementary (completed).
History of the United States—Anderson's.
Cicero's Orations (three orations)—Bullion's Latin Grammar.
Greek—Grammar and Reader.

THIRD TERM.

Geometry—Robinson (first four books).
History of the United States (completed).
Virgil—Three Books of Æneid; Latin Grammar
Xenophon's Anabasis (two books); Greek Grammar.

Regular lessons in Writing, Spelling, Elocution and English Composition from beginning.

The course preparatory to the Scientific, the Engineering and the Military Departments is the same as the above with the substitution of Citizens' Manual, Physiology, Natural Philosophy and Stoddard's Mental Arithmetic, each one term respectively, for the studies of Greek.

The studies preparatory to the Agricultural Department are as follows:

First Term—Algebra; Arithmetic; Grammar; Georgraphy.

Second Term—Algebra; Arithmetic; Grammar; History U. S.

Third Term—Geometry; Arithmetic; Grammar; History U. S.

SCHEDULE OF DAILY RECITATIONS.

PREPARATORY DEPARTMENT.

FIRST TERM.

YEAR.	FIRST HOUR.	SECOND HOUR.	THIRD HOUR	FOURTH HOUR.	FIFTH HOUR.
Senior Year	Algebra.	Greek Reader or Physiology.	Cæsar.	Book-keeping.	
Junior Year	Geography.	English Grammar 1st. English Grammar 2d.	Latin Lessons. Latin Lessons.	Arithmetic.	Reading or Writing.

SECOND TERM.

Senior Year	Algebra.	Cicero.	Greek Reader or Natural Philosophy.	History U. S.	
Junior Year	Geography.	Latin Reader. Latin Reader.	Arithmetic.	English Grammar.	Reading or Writing.

THIRD TERM.

Senior Year	History U. S.	Anabasis or Stoddard's Mental Arithmetic	Virgil.	Geometry.	
Junior Year	Arithmetic.	Greek Lessons or Citizen's Manual.	Latin Reader. Latin Reader.	English Grammar.	Reading or Writing.

General Remarks.

The West Virginia University owes its existence to the combined bounty of the United States Government, the Legislature of West Virginia, and the citizens of Morgantown. On the 2d of July, 1862, the United States Congress passed an act granting public lands to the several States and territories which should provide Schools for the promotion of Agriculture and Mechanic Arts. Under this act, thirty thousand acres for each of its Senators and Representatives in Congress were appropriated to this State. The proceeds of the sale of these Congressional lands amounted to $90,000.

The Constitution of West Virginia makes it the duty of the Legislature to "foster and encourage Moral, Intellectual, Scientific and Agricultural improvements: and to make provisions for the organization of such institutions of learning as the best interests of general education may demand." The National gift was, therefore, accepted by the Legislature, and a board appointed to organize the Institution, with instruction to "establish Departments of Education in Literature, Science, Art, Agriculture, and Military Tactics—including a Preparatory Department"

The Legislature, realizing the value of such an Institution, its priceless worth to the State and Nation, its indispensable necessity to the new mountain commonwealth, and in pursuance of its constitutional duty, has increased the endowment to about $110,000, with annual appropriations for current and contingent expenses. As no part of the Congressional grant can be applied to the erection of buildings (one-tenth only being allowed for the purchase of an experimental farm), the Legislature has also made provision for the supply and keeping in order of such buildings as the growth of the Institution may, from time to time, demand. Every interest of West Virginia requires that she furnish her sons the best possible educational advantages within her own borders. For the development of West Virginia resources, it is necessary that West Virginia brain should be educated on West Virginia soil.

The citizens of Morgantown, long noted for their generosity and keen appreciation of educational advantages, contributed in grounds, buildings and money, about $50,000.

The University stands, therefore, in important relations to Nation and State, and is bound to the sacred performance of all duties growing out of these relations

NAME AND GOVERMENT.

At the beginning, in common with some other National Colleges, it was simply called the "Agricultural College." Having been, however, fully adopted by the State, and the means originally supplied to aid in its establishment being further supplemented by the Legislature, an act was passed, pursuant to the recommendation of the Governor, ordering that it should thereafter be known by the style and designation of "WEST VIRGINIA UNIVERSITY." It is under the immediate oversight of a Board of twelve Regents, one from each Senatorial district, appointed by the Governor, and required to report biennially, through the Governor to the Legislature. The bitterness of partisan and sectarian disputes is excluded from its halls and every effort made to secure to each student the full advantage of a broad and manly culture.

SCOPE.

This is entirely in accord with the original design of the institution, as seen in the first paragraph of these "General Remarks." The act of Congress contemplated the founding of institutions that would furnish not only "*practical*" but also "*liberal* education"—education "in the several *pursuits*," and just as certainly "in the several *professions*," of life. It forbids the exclusion of "classical studies," and requires attention to Agricultural, and Mechanical Education, Military Tactics, etc. The act of the Legislature contemplated a school of general instruction, and directed the Board to organize several distinct departments as above enumerated, in the interest of the *people* of the State and of the Nation.

We trust that in the extent and in the quality of it work, and thoroughness of its discipline and culture, as well as in adaptation to the demand of the age, the UNIVERSITY will prove itself deserving of no second rate position among the institutions of our land. It designs, by its instruction in Literature and Art: in Language, ancient and modern; in Mathematics, pure and applied; in the Sciences, agricultural, physical, mental, moral and social; by its recitations, lectures, examinations and elevating influences, to educate, inform and discipline the student's mind; to strengthen his moral principles, and supply such general and generous, as well as special, culture as will best prepare him for success and usefulness in any pursuit or profession in life.

OPPORTUNITIES AFFORDED.

The work which the University is accomplishing can be readily understood from the Courses of Study prescribed in each of the department as already set forth.

We call special attention, however, to some features of the following Department, viz:

LAW AND MEDICINE.

The Board of Regents at their meeting in June, 1878, took the first step toward the creation of Departments of Law and Medicine in the University. A chair of Law and Equity, and also a chair of Anatomy, Physiology and Hygine were established. Instruction in these chairs has been given regularly, ever since. The number of students in these Departments is gradually

increasing, and as the fact of their establishment, and the advantages they offer become more generally known, attendance upon them will be greatly enlarged. These two Departments supply a long felt need in the University, and will materially increase the number of students, as well as elevate the character of the school.

The law provides that five Cadets may be appointed for each Senatorial District in the State. These are educated free of cost for tuition, books, stationery, etc. For such as desire a military and engineering education, this department is provided. Cadets, however, are not limited to this, but may pursue their studies in any department of the University, subject to the general regulations laid down in the Code for the Cadets. Other students are permitted to drill, on condition that they provide themselves with the neat and becoming uniform of the Corps. Drill occupies one hour on each of four days in the week. The United States Government liberally furnishes the special supplies required for this department. These are of the latest and most improved construction.

Applicants for admission to the Corps should address the Regent of the Senatorial District in which they reside, stating age, attainments, giving reference as to character, etc. Applicants must be between sixteen and twenty-one years of age. The members of the Cadet Corps are generally esteemed among the best scholars in the University.

THE PREPARATORY.

Comparatively few of our young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. This department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity of this Department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of Collegiate Study proper, or shutting out from the advantages of the Institution many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or, if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

Those who do not contemplate a full course, can also here be furnished with instruction in such preparatory studies as they may desire to pursue.

OPTIONAL COURSE.

An Optional Course is allowed those students whose special tastes or necessities prevent them from graduating in any of the regular Departments. Parents and guardians of students who expect to attend the University are, however, earnestly advised to direct their studies with a view to entering one of the regular Departments. The attention of those who teach in our intermediate schools is also respectfully invited to this suggestion.

During the Spring term of each year (beginning on the second Wednesday

of March), unusual facilities are provided for all who may desire, either to take a short and limited course, or to fit themselves for the higher grades of teaching, clerking, or other *specialties*. All needed assistance in this work being rendered by the several Professors of the University, superior advantages are thus afforded to all comers.

NORMAL INSTRUCTION.

When desired, classes are formed in the Theory and Practice of Teaching, under the charge of an able and experienced instructor. Lectures are from time to time delivered before the class by the several members of the Faculty. The daily contact of the students in the class-room with their teachers, observing their methods and studying their plans, affords fine opportunities in this department of instruction. Nowhere in the State are afforded better facilities for practical Normal drill. The graduates of the University have been remarkably successful in securing desirable positions as teachers, and have in almost every instance fully satisfied their employers, retaining their positions as long as they desired them. The Faculty of the University cheerfully render their assistance to capable students and graduates desiring positions as teachers.

REQUISITES FOR ADMISSION.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other Colleges must produce certificates of honorable dismission from the same. No person shall be admitted into the Senior Class after the beginning of the University year.

III. Those entering as Students for a Degree in any department of the University, must sustain an examination in the various studies of the Preparatory School of the University, or their equivalent.

IV. Candidates for advanced standing must sustain an examination in the previous studies of the department which they desire to enter.

V. The regular examination for admission of candidates, who have not pursued the preliminary studies in the Preparatory Schools of the University, will take place on Friday, succeeding Commencement, and on the first day of the first term.

VI. Candidates should procure a copy of the printed laws of the University, also the Treasurer's receipt for tuition before presenting themselves for enrollment.

VII. Applicants for admission to the Preparatory Department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic through common fractions.

VIII. Students are required to pronounce Greek and Latin according to the so-called Continental method.

EXAMINATIONS.

I. Each student, at the close of the Term, shall stand a public written examination upon all the studies which he has pursued during that Term. No student shall be excused for non-attendance on such examinations, except upon

presentation of a reason which may be considered valid by the Faculty. No student who may be absent, and not thus excused, shall be allowed to continue in connection with the University. If at the close of any Term a student shall have failed to attain a standing of six, on a scale of ten, owing to a failure in examination, he shall be informed of the fact, and he may be allowed to stand a special examination under the same committee at any time before the beginning of the next College year.

II. The examination of each class shall be conducted by a committee composed of three members of the Faculty, who shall, within three days next preceding the examination, select a series of questions, not less than nine nor more than fifteen, in number, and submit the same in writing to the class at the time of examination.

III. After examination the committee shall examine the papers and determine the standing made by each student in examination, which shall be considered the equivalent of one month's standing in recitation.

IV. Before a student shall be entitled to enter a higher class he shall, on a scale of ten, have attained a minimum standing of six in each study belonging to his class, which shall be determined by the average of his recitations and examinations.

V. Students who have not before been at the University should, on their arrival, report themselves to the President, and by him be assigned to such department and studies as they may desire and be prepared to enter. When a regular course of study is once adopted, the student is not allowed to vary from it, or change to another, without permission.

TUITION.

TUITION IN THE PREPARATORY DEPARTMENT, - - -	$5 00	per term.
" IN OTHER DEPARTMENTS - - - - - - - - -	8 00	"
CONTINGENT FEE IN PREPARATORY DEP'T - - - - -	2 00	"
" " " OTHER DEPARTMENTS - - - - -	2 00	"

Ministerial Students are admitted free.

BOARDING AND EXPENSES.

THE UNIVERSITY HAS NO DORMITORIES. This is a matter both of necessity and policy; of necessity, because the State has not been able to furnish money to build dormitories; of policy, because it is thought better for the students to be distributed among the people of the University town, amenable to the common laws and sentiments of society. The public bounty stops at furnishing free instruction, leaving to private hands the providing of maintenance.

Three methods of boarding are practiced: (1) Self boarding, by individuals, or, more commonly, by small groops or colonies composed of members of the same family, or of neighboring families. Rooms are hired, and furniture, provisions and fuel are brought from home. When well managed, this is an excellent and very economical mode of living. From $1.00 to $1.50 a week per pupil may be set down as the cost. (2) Club boarding. This has been practiced for some time and is an excellent system. A company of young men rent a number of rooms or an entire house and then organize and oper-

ate a boarding club. The price of boarding in clubs varies from $1.50 to $2.25 per week, including rent of room. (3) Boarding in familes. The difficulties formerly encountered in procuring suitable places for students desiring to board in families, have disappeared. Good boarding can be found at reasonable prices ranging from $2.50 to $3.00.

Incidental expenses depend on the habits of the student. The law prohibits students incurring debts at stores, groceries, etc., except on written order of parents, guardian or teacher. Unnecessary and lavish expenditures induce not only waste of time and means, but neglect of study and formation of bad habits.

The *necessary* expenses for the college year of forty-one weeks are less here than in any other place known to us, where the same quality of instructions and other equal advantages are furnished. *A young man of moderately economical habits need not spend more than $175.00 per year including board, room-rent, tuition, etc., and have every advantage afforded by the University.*

PRIZES.

THE REGENTS' PRIZES.—To the student who shall write the best essay upon a given subject, $25. To the student who shall be adjudged the best declaimer, $15. These prizes to be awarded after public competition, by a committee of citizens appointed by the Faculty.

These were awarded at the last contest as follows:

Essay—C. E. Grafton	$25 00
Declamation—L. J. Williams	15 00

THE PRESIDENT'S PRIZES—In the annual contest of the Columbian and Parthenon Literary Societies, the President of the University offers the following prizes: To the successful Debator, $40: to the successful Orator, $25: to the successful Essayist, $25; to the successful Declaimer, $10. The prizes to be awarded by a committee selected by the Faculty.

DISCIPLINE.

The rules of the University require that every student shall be in his place at all stated exercises from the opening to the close of his connection with the University. A record is kept in which are entered the grade of scholarship of each student, his absence from the exercises of the institution, his tardiness, or failure in recitation, unless satisfactorily accounted for. An abstract of this record, is sent at the close of each term, to parents or guardians, so that they may see what and how their sons and wards are studying, and how they stand in scholarship and deportment. In case of negligence, irregularity, or other misconduct, the students will be privately admonished and the parents or guardian will be informed of the fact. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is especially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his classmates that he be

punctual in his place from the first day of the term till the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with those duties.

The government of the students proceeds upon an entirely Christian basis. Kindness, gentleness and trustfulness are relied upon, rather than sternness, impatience and suspicion. In such an atmosphere, all noble and manly qualities ripen, and students learn to demean themselves as Christian gentlemen. Students are encouraged and incited to form habits of economy, industry, self-reliance, truthfulness and purity, and thus to become a law unto themselves.

RELIGIOUS INSTRUCTION AND WORSHIP.

The exercises of each day are opened with reading the Scriptures, singing and praper, at which all the students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect. The President of the University frequently preaches on Sunday afternoon in the chapel hall. The institution is entirely free from sectarian control or denomination.

In the internal management and practical working of the institution, there is not now, and never has been, the slightest denominational friction.

LIBRARY.

A respectable beginning towards a University Library has been made. About five thousand volumes have been carefully selected and placed on its shelves, including, not only many choice and valuable books of reference, but also standard works in the various departments of History, Biography; Theology, Agriculture, Arts, Science and General Literature. During the past year, about one hundred and fifty volumes have been added by purchase to the Library, including a number of very valuable works on Literature and Science.

We respectfully request the friends of education to make contributions to its shelves. In addition to those hitherto granted, the following donations have been received during the year:

Hon. B. F. Martin, - - - -	Public Documents.
Hon. H. G. Davis, - - - -	Public Documents.
Department of the Interior, - - -	Public Documents.

Nearly all the Weekly journals of the State, the Daily Wheeling *Register*, the Wheeling *Intelligencer*, and valuable religious papers of all leading religious denominations are gratuitiously sent to the reading room of the University.

MUSEUM.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many sepecimens in other departments of Natural

History. We request all who are interested in such matters to send suitable specimens for the museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labelled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The vicinity of the University offers unrivalled advantages for the study of practical Geology. Especial attention is paid to this branch.

The laboratory of Practical Chemistry is in operation. The instruction for the present is devoted chiefly to analysis, with its application to agriculture.

DONATIONS TO THE MUSEUM DURING THE YEAR.

Ed. H. Dick--Fossil ferns from the coal measures, and shark's teeth from South Carolina.

Prof. C. H. Schaeffer--Fossil ferns from Wheeling, W. Va.

UNITED STATES SIGNAL STATION.

By direction of General Meyer, Chief Signal Officer of the Army, a signal station has been established at the University for the benefit of Commerce, Agriculture and Science. It is, at present, in charge of Sergeant Sprigg, S. S., U. S. Army. Students are by this means furnished with special advantages for the study of Meteorology and related subjects. The frequent and carefully recorded observations taken by means of the most improved instruments will furnish accurate and reliable data for hereafter estimating climatic changes in West Virginia. By this means also, the newspapers, boards of trade, and river men generally, at Pittsburgh, Wheeling and Cincinnati, if they so desire, can be reliably advised of special movements in the river at the head of navigation. Sergeant Sprigg also teaches Telegraghy and Signaling.

LITERARY SOCIETIES.

There are two of these, (the Parthenon and the Columbian,) in connection with the University, supplied with suitable halls, tastefully furnished, whose exercises in Composition, Reading, Orations, Debate and Criticism are, in many respects, of great advantage to the student. They also afford facilities for the study of, and acquaintance with, Parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries.

LOCATION.

Morgantown, the seat of the University, is beautifully located on the right bank of the Monongahela river, Monongalia county, West Virginia. The scenery arround is exceedingly attractive and picturesque. The place has long been famous for its social, intellectual and moral culture, and general healthfulness. Coaches leave every morning to and from Fairmont, on the Baltimore and Ohio Railroad. There is also a daily conveyance between Morgantown and Uniontown, Pa. Steamboats from Pittsburgh arrive every day at Geneva, twelve miles below Morgantown, and Congress has made liberal appropriations for the continuance of slackwater navigation in the Monongahela as

far as Morgantown. A place more eligible for the quiet and successful pursuit of Science and Literature is nowhere to be found.

GROUNDS AND BUILDINGS.

The buildings are eligibly situated, and are admirably adaptod to the purposes of the University. They are immediately outside, and within a few minutes' walk of Morgantown. The campus is ample, and is a fine natural park. The grounds command a wide and noble prospect: the town, the river, the bridge, the mountains, all feast the eye and soul. The buildings are models of architectural beauty and convenience, and are *healthfully* constructed and heated. In addition to Preparatory Hall, the Armory has been furnished, and is now occupied. The splendid University Building has also been finished and furnished. Year by year, all the appointments of the University grow more desirable and attractive. It is surely winning its way to the lasting affection and deserved support of the people of West Virginia.

SIGNAL SERVICE U. S. ARMY.

Division of Telegrams and Reports for the Benefit of Commerce and Agriculture.

Annual Means for Morgantown, W. Va., for the Year 1880.

1880.	BAROMETER.							THERMOMETER.							WIND.							Am't of Rain and Melted Snow.		
	Mean.	Mean of.			Range.			Mean.	Mean of.			Range.			Prevailing Direction	Number of Miles.					Max. vel. during mo.	Amount in Inches.	No. of Days on wh'h Rain or Snow Fell.	Humidity.
		A. M. Observ.	P. M. Observ.	Night Observ.	Highest.	Lowest.	Difference.		A. M. Observ	P. M. Observ.	Night Observ.	Maximum.	Minimum.	Difference.		Noon to 6 P. M.	6 P. M. to Midnight	Midnight to 6 A. M.	6 A. M. to Noon.	Total.				
January	30.109	30.154	30.066	30.104	30.513	29.406	1.167	47.9	43.4	54.0	46.6	70.	12.	58.	S. W.	1,621	1,172	1,149	1,094	5,036	42.	5.77	15	67.1
February	30.080	30.104	30.056	30.096	30.739	29.335	1.404	41.8	37.6	47.9	39.4	71	3.	68.	S. W.	1,970	1,019	1,175	1,584	5,748	40.	4.53	14	62.4
March	30.059	30.083	30.010	30.075	30.509	29.231	1.278	43.4	38.5	49.0	41.7	71	20.	51.	S. W.	2,191	1,506	1,150	1,455	6,302	48.	5.10	21	65.4
April	29.974	30.013	29.907	29.986	30.404	29.416	0.988	56.0	51.3	63.0	53.3	81.	28.	53	S. W.	1,100	1,803	2,522	1,378	6,803	44.	4.30	13	57.9
May	30.027	30.008	29.974	30.028	30.396	29.621	0.775	68.2	63.7	76.3	63.5	86.	36.	50.	S. W.	348	1,048	1,659	507	3,562	26.	2.24	7	60.7
June	29.980	30.014	29.944	29.987	30.266	29.580	0.686	71.1	67.7	77.5	67.5	89.	46.	43.	S. W.	446	996	1,615	598	3,655	28.	6.66	15	71.6
July	29.975	30.007	29.937	29.983	30.169	29.679	0.490	71.8	68.0	78.4	67.9	89.	53.	36.	S. W.	261	624	1,237	421	2,543	34.	3.80	16	75.8
August	30.021	30.086	29.978	30.021	30.291	29.678	0.613	71.4	66.9	8.0	68.7	84.	53.	31.	S. W.	282	754	1,141	476	2,653	36.	7.25	15	78.5
September	30.063	30.100	30.017	30.067	30.391	29.695	0.696	63.5	58.5	70.1	60.9	85.	40.	45.	S. W.	381	908	1,235	470	2,994	24.	3.18	11	77.0
October	30.093	30.133	30.046	30.097	30.495	29.584	0.911	53.7	48.3	61.2	50.8	75.	31.	44.	S. W.	662	1,174	1,610	688	4,134	26.	3.07	14	69.8
November	30.216	30.251	30.160	30.224	30.810	29.335	1.475	40.1	35.5	45.8	38.5	72.	8.	64.	S. W.	667	1,097	1,520	842	4,126	36.	1.99	15	63.6
December	30.090	30.097	30.049	30.118	30.711	29.434	1.277	31.1	28.5	34.9	29.8	67.	9.	76.	S. W.	1,037	1,211	1,562	1,080	4,890	39.	3.99	20	65.3
An'l Means.	30.057	30.087	30.012	30.065	30.475	29.499	0.975	55.0	50.7	61.3	52.4	78.3	26.8	51.6	S. W.	*10,966	*13,312	*17,575	*10,593	*52,446	†35.2	4.32	*176	67.9

*Sum total. †Max. vel. during year.

GENERAL REMARKS.

January	Thunder-storm on 20th. Dandelion in bloom on 21st. Frost on 1st, 13th, 14th, 15th, 16th, 19th, 25th, 26th and 29th.
February	Lunar halos on 16th, 17th and 24th. River frozen over on 5th. Frost on 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 22 and 26.
March	Severe thunder-storm on 4th. Freshet in river on 8th. Frost on 18, 22, 23, 25, 29 and 31.
April	Freshet in river on 26th. Trees in bloom and budding on 14th. Sleet on 30th. Frost on 8th and 9th.
May	Solar halo on 4th. "Seventeen year locusts" appeared in great numbers, damaged few trees; frost on 1st.
June	"Seventeen year locusts disappeared on 18th. Freshet in river 14th to 17th. Solar halo on 9th.
July	Hail on 15th. Thunder-storm on 19th and 26th. Small range in barometer, excess of temperature.
August	Thunder-storm on 11th, 19th, 29th. Great excess of rain-fall. Solar halos on 6th and 14th.
September	First frost of season on 30th. Solar halo on 21st. Lunar halo on 21st
October	First heavy frost and first ice and snow on 19th. Polar bands on 17th.
November	River frozen over on 22d Ice broke up on 30th Highest water, 13 feet 9 inches.
December	Unusually heavy snow storms in latter part of month. River rose to 22 feet 6 inches on 5th.

Prepared by authority of the Chief Signal Officer of the Army.

Morgantown, W. Va., April 1st, 1881.

J. C. SPRIGG, JR., Serg't S. C. U. S. Army.

CATALOGUE

OF

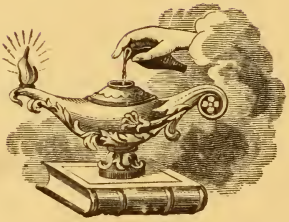
West Virginia University,

MORGANTOWN.

FOR THE YEAR 1881-2.

WHEELING:
W. J. JOHNSTON, PUBLIC PRINTER.

1882.



Calendar.

The University year includes forty-one weeks, and is divided into three terms.

The First Term begins on the first Wednesday of September, the second on the fourth Wednesday of November, and the third on the Second Wednesday of March.

The Annual Commencement is on the second Thursday of June.

Prompt attendance at the beginning of each term is very important to the student.

1882.

June 1st—Thursday, 9 a. m —Annual Examination begins.

4th—Sunday, 11 a. m.—Baccalaureate Sermon.

6th —Tuesday, 8 p. m.—Lecture before the Students.

7th.—Wednesday, 8 p. m.—Address to the Literary Societies.

8th.—Thursday, 9 a. m.—Commencement Day. 2 p. m., Anniversary of West Virginia Historical Society. 8 p. m., Regents' Prize Contest.

September 6th—Wednesday, 9 a. m.—Examination of Candidates for admission.

7th —Thursday, 9 a. m. —Regular work of 1882-3 begins.

November 21st—Tuesday—First Term ends.

22d—Wednesday, 9 a. m.—Second Term begins.

1883.

March 13th.—Tuesday—Second Term ends.

14th.—Wednesday—Third Term begins.

April 20th.—Friday—Junior Exhibition.

June 14th.—Thursday—Third Term ends.

Commencement.

Board of Regents.

No. Dist.	Name of Regent.	P. O Address
1	B. W. ALLEN,	Wheeling.
2	JAMES MORROW, Jr.,	Fairmont
3	M. S. HALL,	Harrisville.
4	D. D. JOHNSON,	Long Reach.
5	JAMES STEWART,	Raymond City.
6	H. S. WALKER,	Charleston.
7	E. A. BENNETT,	Huntington.
8	C L. THOMPSON,	Hinton.
9	T. J. FARNSWORTH,	Buckhannon.
10	H. W. BROCK,	Morgantown.
11	JOHN A. ROBINSON,	Patterson's Creek
12	D. B. LUCAS,	Charlestown.

Officers of the Board.

D. D. JOHNSON, President.
A. W. LORENTZ, Treasurer.
HUGH W. BROCK, Secretary.

Executive Committee.

HUGH W. BROCK, Chairman.
JOHN J. BROWN.
C. B. DILLE.
W. C. McGREW.
JOS. MORELAND.
THOS. H. PRICE.
E. SHISLER.
J. C. WALLACE.

Secretary.

JAS. McM. LEE.

Superintendent of Grounds and Buildings.

JAMES McM. LEE.

Faculty and Teachers.

———, PRESIDENT,

*Prof. of Mental and Moral Science and Evidences of Christianity.

D. B. PURINTON, A. M., VICE-PRESIDENT,

ACTING PRESIDENT.

Prof. of Mathematics and Astronomy.

ROBERT C. BERKELEY, M. A.,

Prof. of Ancient Languages and Literature, and Secretary of Faculty.

JOHN I. HARVEY, A. M.,

Prof. of Modern Languages and Literature, and Librarian.

F. S. LYON, A. M.,

Prof. of History, Political Economy and Belles Lettres.

I. C. WHITE, A. M.,

Prof. of Geology and Natural History.

*The Studies of this Chair have been temporarily distributed among the other Professors.

FACULTY—Continued.

A. W. LORENTZ, A. M.,

Principal of the Preparatory Department.

H. W. BROCK, M. D.,

Prof. of Anatomy, Physiology, and Hygiene.

ST. GEORGE T. BROOKE,

Prof. of Law and Equity.

WOODVILLE LATHAM, JR.,

Prof. of Agriculture, Chemistry and Physics.

JAMES S. STEWART, M. S.,

Assistant in Preparatory Department.

JAMES McM. LEE, A. M.,

Major and Commandant of Cadets, and Assistant in Preparatory Department.

J. C. SPRIGG, JR., SERG'T S. C. U. S. A.,

Meteorological Observer and Instructor in Signaling and Telegyaphy.

WM. DANCER,

Janitor.

Lectures.

REV. B. CADE,

"Creeds."

REV. C. P. MASDEN,

"The Philosophy of Happiness, and the Art of Making Others Happy."

G. W. ATKINSON,

"Think, Work, Win."

REV. J. B. MULFORD,

"Physiognomy."

UNDERGRADUATES.

SENIORS.

Boyd, Thos. R..... .... Class...Galva, Ill.

Brown, Zalmon Kent .....Class...Morgantown.

Courtney, David Hall ..... Class.. Randall, Monongalia Co.

Cox, Arthur L..... ..... Sci .....Fairmont, Marion Co.

Hodges, Theophilus E..... Class...Buckhannon, Upshur Co.

Jeffries, Elias D ....Class...Arbuckle, Mason Co.

Lawhead, James Henry..... Sci .....Morgantown.

Lewis, G. C ....Class...Clarksburg, Harrison Co.

Stewart, James Henry.. ..... Class...Elsinore, Putnam Co.

Class—Classical Course. Sci.—Scientific Course.

JUNIORS.

Baker, George C..... ..... Class...Morgantown.

*Boyers, Luther M.....Class ..Randall, Monongalia Co.

Bland, William Thomas.....Sci .....Weston, Lewis Co.

Brown, Benjamin ....Class...Charleston.

Brown, S. B..... .. . .Class...Gladesville, Preston Co.

*Corke, J. F .....Class...Clarksburg, Harrison Co.

*Hough, Walter ....Class...Morgantown.

Johnston, John L .... Sci .. ...Pentress, Monongalia Co.

Lazzell, I. G ....Class...Maidsville, Monongalia Co.

*Morris, H. Perry ....Class...Morgantown.

*Musgrave, John Edgar .. ....Class ..West Columbia, Mason Co.

Wells, S. P. Jr..... ..... .Sci .....Parkersburg, Wood Co.

Class -Classical Course. Sci.—Scientific Course. *Conditioned.

SOPHOMORES.

*Anderson, Elisha Hoffman...Class...Easton, Monongalia Co.

*Berkeley, R. C. Jr..... .....Class...Morgantown.

*Brooke, Lee Davis..... Class...Helena, Montana Ter.

*Chapman, W. G. Jr..... Sci.....Warsaw, Ind.

Foster, G. B.....Class...Wolf Creek, Monroe Co.

McCutcheon, J. L..... ..... Class...Cross Lanes, Nicholas Co.

*McMillen, Edward Willie .....Class...Masontown, Preston Co.

*Miller, O. M..... ....Class...Russellville, Fayette Co.

*O'Brien, Daniel Ulysses.....Sci.....Weston, Lewis Co.

*Purnell, Frank Morgan.....Class...Benwood.

*Reed, D. K..... .... Class...Grafton, Taylor Co.

*Robinson, Harry Lee.....Class...Uniontown, Fayette Co. Pa.

Class—Classical Course. Sci.—Scientific Course. *Conditioned.

FRESHMEN.

Barb, W. T. W..... ..Sci.....Morgantown.

Casteel, D. T. E.....Class...Oakland, Md.

Fleming, Harvey..... .....Class...Auburn, Ritchie Co.

Gaines, Nathaniel West.....Class...Fayetteville, Fayette Co.

Gaines, Joseph Holt. .....Class...Fayetteville, Fayette Co.

Michael, Walter Howard..... .Class...Bruceton Mills, Preston Co.

Rohrbough, Irvin McNulty...Class. .Buckhannon, Upshur Co.

Sweeney, John David... .....Sci.....Centreville, Tyler Co.

Tapp, Robert W .... Class...Morgantown.

Yokum, Humbolt .....Sci.....Beverly, Randolph Co.

Class—Classical Course. Sci.—Scientific Course. *Conditioned.

OPTIONAL STUDENTS.

Adams, Nelson Daniel... .....St. George, Tucker Co.

Beall, William Ryland .....Cumberland, Md.

Brand, E. P ....Laurel Point, Monongalia Co.

Bush, Asa Bee..... ..... Tannersville, Gilmer Co.

Cooper, Charles Nelson..... .. Belleville, Wood Co.

Devine, Jos. M..... ..... . Wheeling.

Davis, George Warren..... .... DeKalb, Gilmer Co.

Eakin, Clement Levier..... Wadestown, Monongalia Co.

Everett, Dick F. ....Connellsville, Pa.

Harris, Floyd Walter .....Meadowville, Barbour Co.

Haymond, Geo. H... . .. .Morgantown.

Hartigan, Jas. Wm..... .....Piedmont, Mineral Co.

Jamesson, Harper C..... . .....Piedmont, Mineral Co.

Kelley, George Macklen. .....Morgantown.

Latham, Philip Gray..... . .....Morgantown.

Nutter, Melvin D..... Elk City, Barbour Co.

Poling, Francis Asbury ..... Phillippi, Barbour Co.

Snodgrass, Elisha McClellan.. Auburn, Ritchie Co..

South, Frank. .... Taylortown, Greene Co., Pa.

Smith, J. W. ....Maidsville, Monongalia Co.

Waters, Otis Watson.....Randall, Monongalia Co.

Wilson, John Franklin.....Grafton, Taylor Co.

PROFESSIONAL STUDENTS.

Law Department.

Cox, A. L ..... Fairmont Marion Co.

Cole, Geo. C ..... Cassville, Monongalia Co.

Garlow, M. T..... Bunner's Ridge, Marion Co.

Keck, L. V..... Morgantown.

Morgan, B. S..... Laurel Point, Monongalia Co.

Rich, W. ..... " " " "

Smith, J. W ..... Maidsville, Monongalia Co.

White, T. L..... Rock Lick, Marshall Co.

Tabb L. C..... Charlestown, Jefferson Co.

Medical Department.

Cooper, C. N. ..... Bellville, Wood Co.

Jamesson. H. C..... Piedmont, Mineral Co.

Latham, Percy..... Morgantown.

Lazzell, I. G..... Maidsville, Monongalia, Co.

Morgan, B. S..... Laurel Point, Monongalia Co.

Musgrave, J. E..... West Columbia, Mason Co.

O'Brien, D. U..... Weston, Lewis Co.

Wade, S. S ..... Morgantown.

Yokum, H..... Beverly, Randolph Co.

PREPARATORY DEPARTMENT.

FACULTY.

D. B. PURINTON, A. M., PRESIDENT,

Instructor in Vocal Music.

A. W. LORENTZ, A. M.,

Principal.

JAMES S. STEWART, M. S., SECRETARY,

Assistant.

JAMES McM. LEE, A. M.,

Major and Commandant of Cadets, and Assistant.

Preparatory Department.

Senior Year.

Bainbridge, Andrew Morgan..... Irontown, Taylor County.
Baker, Edward Enzer.....Morgantown.
Boggess, Stanley Theodore... . Wilsonburg, Harrison County.
Boyers, Simon Leonard..... Randall, Monongalia County.
Brand, Harvey..... .....Cassville, Monongalia County.
Brown, Cassius Clay.....Andy, Monongalia County.
Core, Lewis ....Cassville, Monongalia County.
Davies, Samuel Edward..... Letart, Mason County.
Fleming, Mellville Hynson..... . Cassville, Monongalia County.
Hays, Samuel Augustus.....Glenville, Gilmer County.
Hollingsworth, Henry Sharp.....Volcano, Wood County.
Hughes, Mathew Simpson..... ..Wheeling.
Huston, Charles Russell.....Morgantown.
Kerr, Robert Emmett ....Swamp Run, Upshur County.
Lawlis, James Lisbon..... .....Cassville, Monongalia County.
Lawson, Elias William.....Bridgeport, Harrison County.
Lawson, Lewis Cass..... ....Bridgeport, Harrison County.
Liller, William Albert .....Piedmont, Mineral County.
Meadows, Bhurman Worthington.Normantown, Gilmer County.
O'Brien, William Smith.....Weston, Lewis County.
Protzman, Spurgeon Holmes.....Morgantown.
Sites, Johnson McKee.. ....Upper Tract, Pendleton Co.

SENIOR CLASS—Continued.

Snider, Frank..... ..... Easton, Monongalia County.
St. Clair, Leroy Kramer.....Easton, Monongalia County.
Stuart, Winfield Scott ....West Union, Doddridge County.
Talbott, Ealem D. Jr.. .... Phillippi, Barbour County.
Tennant, Luther..... ..... Miracle Run, Monongalia Co.
Thomas, Jeremiah..... Clifton Mills, Preston County
Thomas, Frank M ....Kingwood, Preston County.
Thrash, John Nathan.....Elk City, Barbour County.
Waters, Nacy McGee .... Raccoon P. O., Preston County.
Watson, Robert Hart..... .....Roanoke, Lewis County.
White, Thomas Lincoln..... Rock Lick, Marshall County.
Wilson, Thomas McLellan.....Laurel Point, Monongalia Co.
Woodford, John Howe. ....Weston, Lewis County.
Yost, Zoath Freeman.....Basnett's P. O., Marion County

Junior Year.

Alkire, Winfield Scott.....Jane Lew, Lewis County.
Anderson, James Evans..... Morgantown.
Armstrong, Robert Allen ..... French Creek, Upshur County.
Armstrong, Bruce..... ..... Bruceton Mills, Preston County
Ashby, Samuel Turner.....Grafton, Taylor County.
Bennett, Clarence Stuart..... Rock Cave, Upshur County.
Birkett, James Adam..... .....Elm Grove, Ohio County.
Breakiron, Charles Luther.. ....Morgantown.
Carroll, Harden D .....Masontown, Preston County.
Chalfan, Solomon Elijah.. .....Pentress, Monongalia County.
Clark, Alvin Kent..... ..... Gaston, Lewis County.
Cobun, William Sherman..... Easton, Monongalia County.
Cox, Isaac S .....Fairmont, Marion County.

JUNIOR YEAR—Continued.

Cox, Lorenzo.....Bradford, Fayette County, Pa.
Durbin, Charles Ray,..... Grafton, Taylor County.
Dye, Waitman T. Willey. ..... Smithville, Ritchie County.
Elliott, Edward Statzman,..... ...Kingwood, Preston County.
Echart, Thos. Layton,.. ... .Easton, Monongalia County.
Forbes, Wm. Houser.. .. .. Wheeling.
Hall, Clark Bare .....Mt. Morris, Greene Co.
Harmison, Charles Chilton.....Romney, Hampshire County.
Harsbarger, William Asbury.....Tunnelton, Preston County.
Hefner, Mathew Wallace..... Burnsville, Braxton County.
Hudkins, Granville Lee.....Nero, Barbour County.
Hughes, William Frank . ...Morgantown.
Hughes, Edwin Holt. .... Morgantown.
Hurley, Edward Daniel..... Barton, Allegheny County, Md.
Jackson, Robert Edward... ... Jane Lew, Lewis County.
Jaco, Lin Milton..... ....Easton, Monongalia County.
Johnson, William Jacob.....Wilsonburg, Harrison County.
Jones, William. .....Lemont Furnace, Fayette County, Pa.
Keener, Joseph Linzy.....Morgantown.
Lazzell, Rufus Fenton..... Maidsville, Monongalia County.
Lyons, William Alexander.....Easton, Monongalia County.
McDanald, Charles H .....Romine's Mills, Harrison Co.
Moredock, William Anderson,....Rice's Landing, Greene Co. Pa.
Pell, Millard..... .....Masontown, Preston County.
Pool, George Walter.....Morgantown.
Posten, Smith Judson..... .. ..Masontown, Preston County.
Pyle, Stephen George. ....Bearsville, Tyler County.
Sinsel, Charles Arthur ... .Grafton, Taylor County.
Stentz, Isaac Sturgiss..... Greensboro, Greene Co., Pa.

JUNIOR YEAR—Continued.

Strickler, Richard Everett... .....Rice's Landing, Green Co. Pa.

Tucker, William Anderson..... Cassville, Monongalia County.

Vernon, William Thomas..... Reedy, Roane County.

Williams, Ira Torris. ....Kittanning, Armstrong Co. Pa.

Williams, Alexander Baird.....Greensboro, Greene Co., Pa.

Young, John Albert..... .....Mason City, Mason County.

Preparatory Department.

*IRREGULAR STUDENTS.

Alkire, Lee .... .Jane Lew, Lewis Co.
Barb, John McElvey ....Morgantown.
Bassell, Jefferson Davis ....Mount Clare, Harrison Co.
Crim, Edward Hall.....Elk City, Barbour Co.
Hoffman, Winfield H..... .....Baltimore, Md.
Kessler, Milton Ausburn. .....Clifton Mills, Preston Co.
Kile, David Washington.....Upper Tract, Pendleton Co.
Lemley, Marcus Chaplin. ..... Randall, Monongalia Co.
McCoy, William Leonard.....Morgantown.
McMillan, William Hodge... .... Rock Lick, Marshall Co.
Pickens, Dever..... ....Overfield, Barbour Co.
Protzman, Alfred Lincoln..... Morgantown.
Shaw, Henry Clay.....Piedmont, Mineral Co.
Strausz, Philip Hurt.....Irondale Furnace, Preston Co.
Tharp, George Washington .....Holbrook, Ritchie Co.
Vandervort, James Hare.....Morgantown.
Van Gilder, George Ethelbert...Morgantown.
Waters, James Maxwe'l..... Randall, Monongalia Co.
White, George Newton..... ..... Rock Lick, Marshall Co.

* Irregular Students are those who study neither Latin nor Greek.

RECAPITULATION.

Seniors	9
Juniors	12
Sophomores	12
Freshmen	10
Optional Students	22
Law Students	9
Medical Students	9
Senior Preparatory Students	36
Junior Preparatory Students	48
Irregular Preparatory Students	19
Grand Total	186
Deduct for those counted more than once	9
Total	177

RECAPITULATION BY COUNTIES IN WEST VIRGINIA.

Barbour	8
Braxton	1
Calhoun	1
Doddridge	1
Fayette	3
Gilmer	4

RECAPITULATION—Continued.

Hampshire	1
Harrison	8
Jefferson	1
Kanawha	1
Lewis	9
Marion	4
Marshall	4
Mason	4
Mineral	4
Monongalia	59
Monroe	1
Nicholas	1
Ohio	4
Pendleton	2
Preston	14
Putnam	1
Randolph	1
Ritchie	3
Roane	1
Taylor	6
Tucker	1
Tyler	2
Upshur	5
Wood	3
Total	159

Recapitulation by States.

West Virginia	159
Pennsylvania	11
Maryland	4
Indiana	1
Illinois	1
Montana Territory	1
Total	177

The following is an exhibit of the number of students enrolled annually from the beginning:

The year 1867–8, shows a total of 124.

The year 1868–9, shows a total of 154.

The year 1869–70, shows a total of 161.

The year 1870–1, shows a total of 166.

The year 1871–2, shows a total of 159.

The year 1872–3, shows a total of 144.

The year 1873–4, shows a total of 138.

The year 1874–5, shows a total of 125.

The year 1875–6, shows a total of 96.

The year 1876–7, shows a total of 93.

The year 1877–8, shows a total of 118.

The year 1878–9, shows a total of 135.

The year 1879–80, shows s total of 132.

The year 1880–1, shows a total of 162.

The present year, 1881–2, shows a total of 177.

Degrees and Certificates.

The following degrees were conferred at the last commencement: That of

MASTER OF ARTS,

UPON

ALSTON GORDON DAYTON, JAS. McM. LEE,
BENJAMIN S. MORGAN, ENOCH JASPER MARSH,
DANIEL RICH.

THAT OF

BACHELOR OF ARTS,

UPON

THOS. E. HODGES, WM. M. HYLAND,
HOWARD N. OGDEN.

CERTIFCATES OF PROFICIENCY WERE CONFERRED IN THE

LAW DEPARTMENT,

ON

EVERETT W. BEDINGER AND SAMUEL C. KELLEY.

Military Department.

FACULTY.

D. B. PURINTON, A. M.,

President.

JAS. McM. LEE, A. M.,

Major and Commandant.

Roster of Cadet Officers.

BATTALION STAFF.

CADET F. M. PURNELL, - - - -	Adjutant.
CADET A. L. COX, - - - - - - -	Sergeant Major.

ORDNANCE DEPARTMENT.

CADET E. D. JEFFRIES, - - - -	Captain of Artillery.
CADET G. C. LEWIS, - - - - - -	Chief of Ordnance.

COLOR GUARD.

CADET D. U. O'BRIEN, - - - - -	Sergeant.
CADET J. E. MUSGRAVE, - - - - -	First Corporal.
CADET J. M. DEVINE, - - - - -	Second Corporal.
CADET A. M. BAINBRIDGE, - - - - -	Third Corporal.

Company Officers.

COMPANY "A."

CADET JAS. H. STEWART - - - - -	Captain.
CADET D. H. COURTNEY - - - - -	First Lieutenant.
CADET GEORGE C. BAKER - - - - -	Second Lieutenant.

NON-COMMISSIONED OFFICERS.

CADET W. T. BLAND - - - - - -	First Sergeant.
CADET B. BROWN - - - - - -	Second Sergeant.
CADET I. G. LAZZELL - - - - - -	Third Sergeant.
CADET I. M. ROHRBOUGH - - - - -	First Corporal.
CADET D. K. REED - - - - - -	Second Corporal.
CADET J. H. GAINES - - - - - -	Third Corporal.
CADET H. FLEMING - - - - - -	Fourth Corporal.

COMPANY "B."

CADET E. D. JEFFRIES - - - - - -	Captain.
CADET G. C. LEWIS - - - - - -	First Lieutenant.
CADET J. H. LAWHEAD - - - - -	Second Lieutenant.

NON-COMMISSIONED OFFICERS.

CADET S. P. WELLS, JR. - - - - -	First Sergeant.
CADET J. L. JOHNSTON - - - - -	Second Sergeant.
CADET C. N. COOPER - - - - -	Third Sergeant.
CADET J. D. SWEENEY - - - - - -	First Corporal.
CADET D. T. E. CASTEEL - - - - -	Second Corporal.
CADET S. B. BROWN - - - - - -	Third Corporal.
CADET E. H. ANDERSON - - - - -	Fourth Corporal.

MARKERS.

COMPANY "A" - - - - - - - - -	E. D. HURLEY.
COMPANY "B" - - - - - - - -	W. S. STUART.

TRUMPETERS.

COMPANY "A" - - - - - -	CORPORAL I. M. ROHRBOUGH.
COMPANY "B" - - - - -	PRIVATE W. A. LILLER.

ROSTER OF STATE CADETS.

No. of District.	Name.	Status.	Enlisted.	Furloughed or Discharged
I.	Brown, S. B.	Present	Sept. 19, 1879	
	Lewis, G. C. ††	Present	Sept 4, 1877.	
	Adams, N. D.	Present	March 8, 1881	
	Birkett, J. A	Present	Dec. 5, 1881	
	White, T. L.	Hon. disch'd.	Sept. 1, 1880.	Mar. 25, 1882
	Alkire, Lee	Drop. from roll*	Sept. 20, 1880	Nov. 22, 1881
	Hughes, M. S.	Present	Apr. 27, 1882.	
II.	Cox, A. L. ††	Present	Sept. 4, 1877	
	Lawson, E. W.	Present	Sept 12, 1881	
	Yost, Z. F.	Present	Sept. 20, 1881	
	Thrash, J. N.	Present	Oct 9, 1881	
	Ogden, H. N.	Graduated	Oct. 2, 1878	June 9, 1881.
	Hagans, W. H.	Resigned	Oct. 17, 1879.	Oct. 11, 1881
	Basnett, W. R.	Hon disch'd.	Sept. 3, 1880	Oct. 11, 1881.
	Garlow, M. T.	Hon. disch'd.	Sept 1, 1880.	Oct. 11, 1881.
	Purnell, F. M.	Drop. from roll*	Sept. 7, 1881	Mar. 8, 1882.
	Cox, I. S	Present	Mar. 24, 1882.	
III.	Fleming, H.	Present	Mar. 31, 1880	
	Snodgrass, E. M.	Present	Oct. 4, 1880	
	Tharp, G. W.	Present	Mar. 9, 1881	
	Dye, W. T. W.	Present	Oct. 4, 1881	
	Johnson, W. J.	Present	Mar. 23, 1882	
	Holt, A. L.	Resigned	Sept. 26, 1879	Sept. 7, 1881.
	Patton, John	Resigned	Oct 25, 1878.	Sept 7, 1881.
	Cork, J. F.	Resigned	Oct. 10, 1879	Feb. 25, 1882.
IV.	Sweeney, J. D.	Present	Mar. 31, 1880.	
	Stuart, W. S.	Present	Sept. 7, 1881	
	Pyle, S. G.	Present	Sept. 7, 1881	
	Hollingsworth, H. S.	Present	Sept. 1, 1880	
	Hyland, W. M.	Graduated	Sept 14, 1877.	June 9, 1881.
	Cooper, C. N.	Drop. from roll*	Sept. 7, 1881	Mar. 8, 1882.
	Vacancy			
V.	Devine, J. M	Present	Sept. 12, 1881.	
	Armstrong, Robt.	Absent on fur	April 11, 1879	June 9, 1881.
	Davis, G. W.	Absent on fur	Sept. 7, 1881	Jan. —, 1882.
	Vacancy			
	Vacancy			
	Knight, L. N.	Resigned	Sept. 26, 1879.	Oct. 11, 1881.
	Hutchinson, R. L. B.	Hon. disch'd.	Sept 17, 1880.	Sept, 7, 1881.
	Young, J. A.	Drop. from roll.	Jan. 15, 1881.	June 9, 1881.

References—* Failed fo attain required standing in studies. † Failed to return books belonging to Cadet Library. †† Class of '82,—vacancy after June 8, 1882.

ROSTER OF STATE CADETS—Continued.

No. of District.	Name.	Status.	Enlisted.	Furloughed or discharged.
VI.	Jeffries, E. D.††	Present	Mar 30, 1877	
	Stewart, J. H.††	Present	Sept. 20, 1878.	
	Musgrave, J. E.	Present	April 11, 1879.	
	Hays, S. A	Present	Dec. 4, 1880	
	Johnston, J. L.	Present	April 11, 1879.	
VII.	Gaines, J. H.	Present	Sept. 12, 1880	
	Bainbridge, A. M.	Present	Sept. 29, 1880.	
	Poling, F. A.	Present	Sept. 30, 1880.	
	Bennett, C. S	Present	Mar. 8, 1882	
	Ramsey, W. H.	Discharged	Mar. 31, 1880.	Mar. 20, 1882
VIII.	Baker, George C.	Present	Mar. 8, 1878	
	Brown, Benjamin	Present	Sept. 12, 1879.	
	Bland, Wm. T.	Present	Oct. 10, 1879.	
	Anderson, E. H.	Present	Sept. 1, 1880.	
	Gaines, N. W.	Present	Sept. 6, 1880.	
IX.	O'Brien, D. U.	Present	Sept. 19, 1879.	
	Rohrbough, I. M.	Present	Sept. 1, 1880.	
	Yokum, H	Present	Sept. 2, 1880	
	Armstrong, R. A.	Present	Mar. 8, 1882	
	Harris, F. W	Absent on fur.	Mar. 8, 1881.	Mar. 8, 1882.
X.	Courtney, D. H ††	Present	Sept. 14, 1877.	
	Lawhead, J. H.††	Present	Sept. 12, 1879.	
	Lazzell, I. G	Present	Jan 9, 1880	
	Tapp, R. W.	Present	Mar. 31, 1880.	
	Michael, W. H.	Present	Nov 4, 1881	
	McMillen, E. W.	Resigned	Sept. 26, 1879.	Oct. 11, 1881.
XI.	Sites, J. M.	Present	Jan. 7, 1881	
	Liller, W. A.	Present	Sept. 7, 1881.	
	Harmison, C. C.	Present	Sept. 19, 1881.	
	Kile, D. W.	Discharged	Sept. 1, 1880.	Oct. 11, 1881.
	Hartigan, J. W	Drop. from roll*	Sept. 12, 1879.	Mar. 8, 1882.
	Hudkins, Y. L.	Present,	Apr. 27, 1882	
	Vacancy			
XII.	Thomas, F M.	Present	Mar. 8, 1882.	
	Bailey, R. M.	Hon. disch'd	Mar. 31, 1880.	Sept. 7, 1881.
	Talbott, E D	Hon. disch'd	Sept 21, 1880.	Oct. 9, 1881.
	Ashby, S. T.	Drop. from roll*	Mar. 15, 1881.	Nov 22, 1881.
	Woodford, J. H.	Drop. from roll*	Sept 1, 1881.	Nov. 22, 1881
	Kitsmiller, L.	Drop. from roll*	Apr. 11, 1880.	June 9, 1881.
	Vacancy			
	Vacancy			
	Vacancy			
	Vacancy			

References—* Failed to attain required standing in studies † Failed to return books belonging to Cadet Library. †† Class of '82,—vacancy after June 8, 1882.

ROSTER OF VOLUNTEER CADETS.

Name.	Status.	Enlisted.	Resigned or discharged.
Wells, S. P. Jr	Present	Sept. 19, 1879	
Casteel, D T. E	Present	Sept. 1, 1880	
Reed, D. K	Present	Oct. 12, 1880	
Nutter, M. D	Present	Mar. 24, 1881	
Williams, A. B	Present	Sept. 7, 1881	
Alkire, W. S	Present	Sept. 7, 1881	
O'Brien, W. S	Present	Sept. 7, 1881	
Kerr, R. E	Present	Sept. 7, 1881	
Strausz, P. H	Present	Sept. 7, 1881	
Jackson, R. E	Present	Sept. 7, 1881	
Robinson, H L	Present	Sept. 1, 1880	
Hughes, M. S	Present	Oct. 25, 1881	
Fleming, M. H	Present	Oct. 26, 1881	
Core, L	Present	Oct. 26, 1881	
Young, J. A	Discharged	Sept. 7, 1881	Nov. 5, 1881.
Williams, I. T	Present	Nov. 29, 1881	
Hurley, E. D	Present	Feb. 18, 1882	
Purnell, F. M	Present	Mar. 8, 1882	
Cooper, C. N	Present	Mar. 8, 1882	
Hurst, N. G	Resigned	Sept. 19, 1880	Sept. 7, 1881.
Chapman, W. G	Resigned	Nov. 4, 1880	Sept. 7, 1881.
Beall, W. R	Resigned	Jan. 10, 1881	Oct. 14, 1881.
Moore, J. F	Resigned	Mar. 15, 1881	Sept. 7, 1881.
Woodford, J. H	Present	Mar. 24, 1882	

RECAPITULATION.

Captains	2
Lieutenants	5
Sergeants	8
Corporals	11
Privates—Regulars	39
Privates—Volunteers	15
Total enrolled within the year	80
Absent or counted twice	12
Present March 24, 1882	68

DISTINGUISHED CADETS, 1880-81.*

Names.	Military.	Course.
Hodges, T. E.	Military	Clasical.
Hyland, W. M.	Military	
Ogden, H. N.	Military	
Courtney, D. H.	Military	
Jeffries, E. D.	Military	
Lawhead, J. H.	Military	
Stewart, J. H.	Military	
Baker, G. C.	Military	
Bland, W. T.	Military	
Brown, Benj.	Military	
Johnston, J. L.	Military	
Lazzell, I G.	Military	
Musgrave, J. E.	Military	
Patton, John	Military	
Wells, S. P., jr.	Military	
Armstrong, Robert	Military	
Cooper, C N	Military	
Cork, J. F.	Military	
Holt, A. L.	Military	
O'Brien, D. U.	Military	
Purnell, F. M.	Military	
Robinson, H. L.	Military	Classical.
Knight, L N.	Military	
Cox, A. L.	Military	
Reed, D. K.	Military	
Lewis, G C.	Military	
Casteel, D. T. E.	Military	Classical.
Conley, H. C.	Military	
Fleming, H.	Military	
Gaines, N. W.		Classical.
Gaines, J. H.	Military	Classical.
Hagans, W. H.	Military	
Hollingsworth, H. S.		Classical.
Hutchinson, R. L. B.	Military	
Kile, D. W.	Military	
Rohrbough, I. M.	Military	Classical.
Sweeney, J. D.	Military	Scientific.

* In accordance with the established custom cadets are reported as distinguished in the departments opposite their names, by reason of having attained a yearly standing of 9 or upwards on a scale of 10.

VOCAL MUSIC.

D. B. PURINTON, A. M., INSTRUCTOR.

Some years ago, the Regents added Vocal Music to the Studies of the University. It is open, free of charge, to the students of all departments alike. The course of instruction embraces one year, as follows:

FALL TERM—Rudiments and Elementary Practice.

WINTER TERM—Rudiments continued. Glee and Chorus Singing.

SPRING TERM—Lectures on Harmony and Composition, Chorus Singing, Review, &c.

STUDENTS.

Adams, N. D.
Birkett, J. A.
Boyers, L. M.
Boyers, S. L.
Brand, E. P.
Bush, A. B.
Casteel. D. T. E.
Davies, S. E.
Eakin, C. L.
Fleming, M. H.
Hays, S. A.
Harmison, C. C.
Lawson, E. W.
Lawson, G. L. C.
McMillan, W. H.
Nutter, M. D.
Poling, F. A.
Protzman, S. H.
Sites, J. M.
Snodgrass, E. M.
Sweeney, J. D.
Tharp, G. W.
Thrash, J. N.
Vernon, W. T.
Waters, N. M.
Watson, R. H.
Williams, A. B.
Yost, Z. F.

COURSE OF STUDY.

The instruction thus far provided for in the University, is embraced in six departments, viz: The Classical, Scientific, Agricultural, Engineering, Military; and for those desiring to qualify themselves for regular admission to any of these, a Preparatory Department. No study has been dropped from any of these Departments, but the method of stating what is required in each has been simplified in the present Catalogue.

I.

CLASSICAL DEPARTMENT.

The studies in this Department, required for the degree of Bachelor of Arts, are as follows:

Freshman Year.

FIRST TERM.

Virgil—Bucolics and Georgics; Latin Prose Composition and Grammar.
Herodotus—Greek Prose Composition and Greek Grammar.
Universal History—Anderson.
University Algebra—Robinson.
Elocution.

SECOND TERM.

Horace—Odes and Epodes; Latin Prose Composition (continued), and Grammar.
Homer—Iliad; Greek Prose Composition (continued), and Grammar.
English Literature—Shaw.
Geometry (completed); Solid and Plane Trigonometry (commenced.
Elocution.

THIRD TERM.

Cicero—De Senectute and De Amicitia; Exercises in Latin Prose Composition and Grammar.
Homer—Odyssey; Prose Composition. Grammar.
Constitution of the United and of West Virginia.
Plane Trigonometry (completed); Spherial Geometry and Trigonometry.
Elocution.

Sophomore Year.

FIRST TERM.

Xenophon—Memorabilia; Exercises in Greek Composition and Grammar.
Rhetoric—Hill.
Mensuration; Surveying; Navigation.
Chemistry—Eliot and Storer's Manual Inorganic Chemistry.
Elocution.

SECOND TERM.

Horace—Satires and Epistles; Exercises in Latin Composition and Grammar.
Comparative Philology; Lectures.
Analytical Geometry and Differential Calculus—Loomis.
Chemistry—Eliot and Storer's.
Elocution.

THIRD TERM.

Livy—Lincoln; Exercises in Latin Composition and Grammar.
Plato—Crito and Apology; Exercises in Greek Composition and Grammar.
Botany—Gray.
Integral Calculus—Loomis. (Optional).
Elocution.

Junior Year.

FIRST TERM.

Euripides's Alcestis; or French.
Mental Philosophy; The Intellect—Haven and Lectures.
Physics.

SECOND TERM.

Anatomy, Physiology and Hygiene, by Lectures.
Tacitus—Germania and Agricola; Latin Composition; or French.
Mental Philosophy; The Sensibilities and the Will—Haven and Lectures.
Physics.
Zoology—Packard.

THIRD TERM.

Demosthenes on the Crown, with Written Exercises; or French.
Logic—Coppee.
Human Anatomy, Physiology and Hygiene, by Lectures.
Zoology—Packard.

Senior Year.

FIRST TERM.

Cicero—De Officiis; with Written Exercises on Historical Subjects; or German.
Moral Philosophy—Wayland.
History of Civilization—Guizot.
Astronomy—Newcomb and Holden.

SECOND TERM.

Sophocles—Œdipus Tyrannus; or German.
Elements of Criticism—Lord Kames.
Astronomy—Newcomb and Holden.
International Law—Woolsey.

THIRD TERM.

Political Economy—Chapin's Wayland.
Tacitus—Annals; or German.
Geology—Historical, with Geological Excursion.
Evidences of Christianity—Alexander's.

If, in this Department, the student selects the French or German instead of the Latin or Greek, he shall be required to study them respectively, during three successive terms, and such selection must be made at the beginning of the Junior or Senior year. The text books for the Junior Year are the same as those of the Scientific Freshman, and for the Senior Year, the same as Junior Scientific.

II.

SCIENTIFIC DEPARTMENT.

The studies in this Department required for the Degree of Bachelor of Science are the following:

Freshman Year.

FIRST TERM.

University Algebra—Robinson.
French—Languellier and Monsanto's or Fasquelle's Course.
Universal History—Anderson.
Chemistry—Eliot and Storer.
Elocution.

SECOND TERM.

Geometry (completed), Solid and Plane Trigonometry (commenced).
French—French Course (continued); French Reader.
English Literature—Shaw.
Chemistry—Eliot and Storer.
Elocution.

THIRD TERM.

Plane Trigonometry (completed)—Spherial Geometry and Trigonometry.
French—French Course (completed); French Reader; Dumas' Napoleon.
Constitution of the United States.
Chemistry.
Elocution.

Sophomore Year.

FIRST TERM.

Mensuration; Surveying and Navigation—Robinson.
French—Voltaire, Charles XII., French Grammar and Exercises.
Rhetoric—Hill.
Physics.
Elocution.

SECOND TERM.

Analytical Geometry, and Differential Calculus—Loomis.
French, Classical Plays—Joynes; Grammar and Exercises.
Physics.
Elocution.

THIRD TERM.

Agriculture,
Integral Calculus—Loomis.
French (Optional)—Pylodet's Classical Literature.
Botany—Gray.
Elocution.

Junior Year.

FIRST TERM.

Analytical Mechanics—Peck.
German—Woodbury's Course or Method.
Mental Philosophy, The Intellect—Haven and Lectures.

SECOND TERM.

Anatomy, Physiology and Hygiene, by Lectures.
Meteorology.
German—Grammar (continued); German Reader.
Zoology—Packard.
Mental Philosophy—The Sensibilities and the Will—Haven and Lectures.

THIRD TERM.

Zoology—Packard.
German—Grammar and Exercises; Schiller's Jungfrau or Maria Stuart.
Logic—Coppee.
Anatomy, Physiology and Hygiene, by Lectures—Human.

Senior Year.

FIRST TERM.

Moral Philosophy—Wayland.
German—Goethe's Iphigenia in Tauris, or Egmont; Grammar and Exercises.
History of Civilization—Guizot.
Astronomy—Newcomb and Holden.

SECOND TERM.

International Law—Woolsey.
German—Fouque's Undine; Goethe's Hermann und Dorothea, or Grammar and Exercises.
Elements of Criticism—Lord Kames.
Astronomy—Descriptive and Physical.
Geology—Lithological and Dynamical—LeConte.

THIRD TERM.

Evidences of Christianity—Alexander's.
Political Economy—Chapin's Wayland.
German—(Optional) Evans' German Literature; Grammar and Exercises.
Geology—Historical, with Geological Excursions.

III.

DEPARTMENT OF ENGINEERING.

The studies in this Department for the first, second and third years are the same as in the Scientific Course. For the Senior year they are as follows:

FIRST TERM.

Civil Engineering—Mahan.
Moral Philosophy—Wayland.
Geology—Lithological, Historical and Dynamical—Le Conte, with Geological Excursions.

SECOND TERM.

Military Engineering—Mahan.
Astronomy—Descriptive and Physical.
International Law—Woolsey.
Elements of Criticism—Kames.

THIRD TERM.

Gillespie on Location, Construction and Improvement of Roads and Railroads.
Astronomy—Practical.
Evidences of Christianity—Alexander's.

The studies of the Modern Languages are the same as in the Scientific Course.

IV.

MILITARY DEPARTMENT.

In addition to the daily drills as Infantry or Artillery, the Cadets are theoretically instructed in Military Science, as follows:

FIRST YEAR.

FIRST TERM—Infantry Tactics; School of the Soldier; School of the Company.
SECOND TERM—Instruction for Skirmishers; Battalion Drill.
THIRD TERM—Military Signaling—(Myer's).

SECOND YEAR.

FIRST TERM—
SECOND TERM—Military History.
THIRD TERM—Artillery Tactics.

THIRD YEAR.

FIRST TERM—Artillery Tactics, (concluded).
SECOND TERM—Military Engineering (Mahan's); Field Fortifications (Mahan's).
THIRD TERM—Advance Guard and Outpost Duty—(Mahan's).

FOURTH YEAR.

FIRST TERM—

SECOND TERM—Ordnance and Gunnery—(Benton's).

THIRD TERM—Military Law and Courts Martial—Benit's.

The above course is seldom taken in full, but officers of the corps are required to study and undergo examination upon Military Engineering, Field Fortification, Advance Guard and Outpost Duty, and Military Law and Courts-Martial.

The annual course in drill for the entire Corps is as follows:

FIRST TERM—Schools of the Soldier, Company and Battalion, including Bayonet Exercises, Skirmish Drill and Target Practice.

SECOND TERM—Artillery—Manual of the Piece and Sabre Exercise.

THIRD TERM—Artillery—School of the Battery Dismounted; Guard Duty; Courts-Martial.

Dress Parades, Reviews, Inspections, and Guard Mountings, are held at least once a week.

The other studies in this Department are those of the classical or the Scientific Departments respectively.

V.

AGRICULTURAL DEPARTMENT.

The studies in this Department are, at present, embraced in a two years' course. Students having creditably completed this course, will be entitled to receive a certificate to that effect.

First Year.

FIRST TERM.

Inorganic Chemistry.—Eliot and Storer.

Physics.

General History.

French or German (Optional).

SECOND TERM.

Chemistry; Zoology.
English Literature.
French or German (Optional).

THIRD TERM.

Botany and Vegetable Physiology.
Physics.
Plain Trigonometry.
Constitution of the United States and of West Virginia.

Second Year.

FIRST TERM.

Geology, Meteorology.
Chain and Compass Surveying.

SECOND TERM.

Entomology.
Astronomy.
French or German (Optional).

THIRD TERM.

How Crops Feed and How Crops Grow—Johnson.
Gillespie, on Roads and Road Making.
Political Economy.
Evidences of Christianity; Alexander's.
Appropriate Lectures on Correlated Subjects will be given throughout the course.

LAW DEPARTMENT.

TUITON FEE $10.

The full course will embrace Common and Statute Law, Mercantile Law, Equity aud Evidence and Constitutional and International Law.

The text-books used in the course of Common and Statute Law will be Blackstone's Commentaries, Stephen on Pleading,

4th Volume of Kent's Commentaries (Real Property), and for *reference* the Code of West Virginia and the subsequent Acts of the West Virginia Legislature.

In the branch of Equity, Evidence and Mercantile Law, the books will be Adams Equity, the 1st Volume of Greenleaf on Evidence and Smith's Mercantile Law.

These text-books will be supplemented by lectures each week, and it will be the endeavor so to incorporate in them the statutory changes in the common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-book used in Constitutional Law will be the "Foederalist." This, however. will be supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions will also be the subject of lectures.

The text-book used in International Law will be Woolsey's Introduction to the Study of International Law. Each day before the lecture there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the text-book as were the subject of the lecture. Besides the daily examinations there will be two general examinations. One of these will be held in the latter part of February, and the other in the last of May. The intermediate one in February will embrace that part of the course which was gone over up to that time, and the final one that part which was passed over from February to May. They will both be conducted in writing, and the questions will have numerical values attached to each. Certificates of distinction will be awarded at the end of the session to those students whose answers in the general examination shall aggregate three-fourths of the aggregate values attached to the questions, and whose answers in the daily oral examinations shall have

been uniformly good. Care will be taken that these certificates shall be awarded only to those who have been habitually studious, and have made steady progress in the acquisition of the fundamental principles of their profession.

It is believed that the holder of one of these certificates will have no trouble in passing an examination by the Judges for admission to the bar of any State in the Union.

As the Common and Statute Law, Equity, Evidence and Mercantile Law will constitute that portion of the whole course for which the practitioner will have daily use, the certificates will be given for proficiency in those branches only.

Constitutional and International Law are parts of the regular curriculum, and students attending the University for the purpose of becoming practitioners will not be required to take the Constitutional and International course.

MEDICAL DEPARTMENT.

The Board of Regents, at its annual meeting in June, 1878, established a Chair of Anatomy, Physiology and Hygiene, and elected as Professor in this department, HUGH W. BROCK, M. D., of Morgantown, whose course of instruction, it was enacted, should occupy two of the three terms of the University year.

This chair was designed by the board to teach the students of the University a more accurate and thorough knowledge of the structure and organization of the human body and of the laws of health than is ordinarily taught in the usual college courses.

It was designed also to serve as a *nucleus* around which, it is hoped, a fully organized Medical Department, in connection with the University, will at no distant day be established.

Pursuant to this action of the board, Dr. Brock entered upon his duties at the beginning of the Spring term of 1879, since which time he has lectured on Anatomy, Physiology and Hygiene, illustrating his oral instructions by diagrams

upon the blackboard, by Anatomical plates, by Anatomical preparations wet and dry, and by dissections upon the dead body made by himself either in the presence of the class or immediately before each lecture. Endeavoring to carry out the object of the Board, he has, in addition to his daily lectures upon Descriptive Anatomy, taught much of Morbid and Surgical Anatomy, explaining the different forms of disease to which each organ is liable, demonstrating upon the subject the various important Surgical Regions of the body, and in connection therewith performing upon the cadaver, in presence of the class, most of the recognized operations in Surgery, such as lithotomy, herniotomy, tracheotomy, division of tendons for the relief of strabismus and clubfoot, amputations, resections, ligation of arteries, etc.

Minute Anatomy has been taught by the use of the microscope.

The Anatomical elements of the solid tissues and fluids of the body, as also many interesting and beautiful physiological phenomena such as the circulation of the blood in the frog's foot and ciliary motion as exhibited by the spermatazoa, epithelium from the frog's mouth, the Fresh Water Mussel and many different forms of Infusoria have been shown the class under the microscope.

In cases where it was practicable to do so patients from private practice have been brought before the class, examined and prescribed for and clinical lectures delivered upon the diseases with which the patients were afflicted. Several important Surgical operations upon private patients have been performed before the class.

The method of examining the urine and other fluids of the body in a state of disease as well as of health has been taught, chemically and microscopically.

In the lectures upon Physiology and Hygiene the means of preserving each organ and the body as a whole in a state of health have been impressed upon the mind of the student.

The interest taken by the members of the class in the studies of this Department of the University, as manifested by

their punctual attendance upon and close attention to the lectures, and also by their evident comprehension of the instruction imparted, as evinced by the daily examinations to which they are subjected upon the topics of the previous lecture, has been highly gratifying to their Instructor and has fully vindicated the wisdom of the Board of Regents in establishing this Department of the University.

The class composing the Medical Department is made up as follows:

FIRST—Of Members of the Junior Class who are required to take Anatomy and Physiology, in course, during the Junior Year.

SECONDLY—Of such State Cadets as elect to take the Course in this Department and who are recommended by the Faculty as qualified by preparatory study to do so.

THIRDLY—Of Medical Students proper, whether or not they be students in any other Department of the University.

Neither Juniors nor Cadets are required to pay any additional fee to that already paid as regular students of the University.

All others are required to pay a fee of ten dollars for admission to the Lectures.

For Students of Medicine who, on account of limited means or time, are not prepared to take a full College Course but who desire to take, in connection with Medicine, studies in other departments of the University which are germane to and essentially necessary to an intelligent study of Medicine as a Science, for example, an Elementary Course in Latin and Greek and a Course in Chemistry, special and favorable provision will be made.

The Course of Instruction in this Department commences with the beginning of the Winter Term, November 23, and continues to the close of the University year in June.

Arrangements have been made for a supply of Anatomical Material, so that all Medical Students of the University will have ample facilities for the study of Human Anatomy by means of dissections made with their own hands.

SCHEDULE OF DAILY RECITATIONS.

FIRST TERM.

	Class.	9 A. M.	9:45 A. M.	10.30 A. M.	11:15 A. M.	12 M.	4 P M.
Classical.	Senior	Astronomy.	Moral Science.	History of Civilization	German.		
	Junior	French		Mental Philosophy.	Physics.		
	Sophomore	Rhetoric.		Surveying.	Greek.	Elocution.	Chemistry.
	Freshman	Greek.	History.	Latin.	Algebra.	Elocution.	
Scientific.	Senior	Astronomy.	Moral Science.	History of Civilization.	German.		
	Junior		Analytical Mechanics	Mental Philosophy.	Physics.		
	Sophomore	Rhetoric.	French.	Surveying.		Elocution.	
	Freshman	French.	History.		Algebra.	Elocution.	Chemistry.

SECOND TERM.

Classical.	Senior	International Law.	German.	Astronomy.	Elements of Criticism.		Law.
	Junior	French.	Physics.	Mental Philosophy.	Anatomy.	Zoology.	
	Sophomore	Comparative Philology	Latin.		Analytical Geometry	Elocution.	Chemistry.
	Freshman	Greek.	Geometry.	English Literature.	Latin.	Elocution.	
Scientific.	Senior	International Law.	Geology.	Astronomy.	Elements of Criticism.	German.	
	Junior	Meteorology.	German.	Mental Philosophy.	Anatomy.	Zoology.	
	Sophomore		Physics.	French.	Analytical Geometry,	Elocution.	
	Freshman	French.	Geometry.	English Literature.		Elocution.	Chemistry.

THIRD TERM.

Classical.	Senior	Ev. of Christianity.	German.	Geology.	Political Economy.		Law.
	Junior	Logic.		French.	Anatomy.	Zoology.	
	Sophomore	Botany.	Latin.		Greek.	Elocution.	
	Freshman	Latin.	Trigonometry.	Greek.	Constitution.	Elocution.	
Scientific.	Senior	Ev. of Christianity.		Geology.	Political Economy.		
	Junior	Logic.	German.		Anatomy.	Zoology.	
	Sophomore	Botany.	Agriculture.	Calculus		Elocution.	
	Freshman		Trigonometry.	French.	Constitution,	Elocution.	Chemistry.

PREPARATORY DEPARTMENT.

Junior Year.

FIRST TERM.

Geography—Guyot's Common School; Map Drawing.
Arithmetic—Stoddard's Complete.
English Grammar—Etymology.
Latin (commenced).

SECOND TERM.

Geography—Guyot's (continued); Map Drawing.
Arithmetic (continued).
English Grammar—Syntax and English Composition.
Latin—Grammar and Reader.

THIRD TERM.

Arithmetic (completed).
English Grammar—Analysis, Prosody, and English Composition.
Latin—Grammar and Readers.
Greek—First Book.

Senior Year.

FIRST TERM.

Algebra—Robinson's Elementary, to Involution.
Book-keeping.
Cæsar (two books)—Latin Grammar.
Greek—Grammar and Reader.

SECOND TERM.

Algebra—Robinson's Elementary (completed).
History of the United States—Anderson's.
Cicero's Orations (three orations)—Bullion's Latin Grammar.
Greek—Grammar and Reader.

THIRD TERM.

Geometry—Robinson (first four books).
History of the United States (completed).
Virgil—Three Books of Æneid ; Latin Grammar.
Xenophon's Anabasis (two books) ; Greek Grammar.

Regular lessons in Writing, Spelling, Elocution and English Composition from beginning.

The course preparatory to the Scientific, the Engineering and the Military Departments is the same as the above with the substitution of Citizen's Manual, Physiology, Natural Philosophy and Stoddard's Mental Arithmetic, each one term respectively, for the studies in Greek.

The studies preparatory to the Agricultural Department are as follows :

First Term—Algebra ; Arithmetic ; Grammar ; Geography.

Second Term—Algebra ; Arithmetic ; Grammar ; History U. S.

Third Term—Gemoetry ; Arithmetic ; Grammar ; History U. S.

SCHEDULE OF DAILY RECITATIONS.

PREPARATORY DEPARTMENT.

FIRST TERM.

YEAR.	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.
Senior Year	Algebra.	Greek Reader or Physiology.	Cæsar.	Book-keeping.	
Junior Year	Geography.	English Grammar 1st. English Grammar 2d.	Latin Lessons. Latin Lessons.	Arithmetic.	Reading or Writing.

SECOND TERM.

Senior Year	Algebra.	Cicero.	Greek Reader or Natural Philosophy.	History U. S.	
Junior Year	Geography.	Latin Reader. Latin Reader.	Arithmetic.	English Grammar.	Reading or Writing.

THIRD TERM.

Senior Year	History U. S.	Anabasis or Stoddard's Mental Arithmetic.	Virgil.	Geometry.	
Junior Year	Arithmetic.	Greek Lessons or Citizens Manual.	Latin Reader. Latin Reader.	English Grammar,	Reading or Writing.

GENERAL REMARKS.

The West Virginia University owes its existence to the combined bounty of the United States Government, the Legislature of West Virginia, and the citizens of Morgantown. On the 2d of July, 1862, the United States Congress passed an act granting public lands to the several States and Territories which should provide Schools for the promotion of Agriculture and Mechanic Arts. Under this act, thirty thousand acres for each of its Senators and Representatives in Congress were appropriated to this State. The proceeds of the sale of these Congressional lands amounted to $90,000.

The Constitution of West Virginia makes it the duty of the Legislature to "foster and encourage Moral, Intellectual, Scientific and Agricultural improvements; and to make provisions for the organization of such institutions of learning as the best interests of general education may demand." The National gift was, therefore, accepted by the Legislature, and a board appointed to organize the Institution, with instruction to "establish Departments of Education in Literature, Science, Art, Agriculture, and Military Tactics—including a Preparatory Department."

The Legislature, realizing the value of such an Institution, its priceless worth to the State and Nation, its indispensable necessity to the new mountain commonwealth, and in pursuance of its constitutional duty, has increased the endowment to about $110,000, with annual appropriations for current and contingent expenses. As no part of the Congressional grant can be applied to the erection of buildings (one-tenth only being allowed for the purchase of an experimental farm), the Legislature has also made provision for the supply and keeping in order of such buildings as the growth of the Institution may, from time to time, demand. Every interest of West

Virginia requires that she furnish her sons the best possible educational advantages within her own borders. For the development of West Virginia resources, it is necessary that West Virginia brain should be educated on West Virginia soil.

The citizens of Morgantown, long noted for their generosity and keen appreciation of educational advantages, contributed in grounds, buildings and money, about $50,000.

The University stands, therefore, in important relations to Nation and State, and is bound to the sacred performance of all duties growing out of these relations.

NAME AND GOVERNMENT.

At the beginning, in common with some other National Colleges, it was simply called the "Agricultural College." Having been, however, fully adopted by the State, and the means originally supplied to aid in its establishment being further supplemented by the Legislature, an act was passed, pursuant to the recommendation of the Governor, ordering that it should thereafter be known by the style and designation of "WEST VIRGINIA UNIVERSITY." It is under the immediate oversight of a Board of twelve Regents, one from each Senatorial district, appointed by the Governor, and required to report biennially, through the Governor to the Legislature. The bitterness of partisan and sectarian disputes is excluded from its halls and every effort made to secure to each student the full advantage of a broad and manly culture.

SCOPE.

This is entirely in accord with the original design of the institution, as seen in the first paragraph of these "General Remarks." The act of Congress contemplated the founding of institutions that would furnish not only "*practical*" but also "*liberal* education"—education "in the several *pursuits*," and just as certainly "in the several *professions* of life. It forbids the exclusion of "classical studies," and requires attention to Agricultural and Mechanical Education, Military Tactics, etc. The act of the Legislature contemplated a school of general instruction, and directed the board to organize several distinct

departments as above enumerated, in the interest of the *people* of the State and of the Nation.

We trust that in the extent and in the quality of its work, and thoroughness of its discipline and culture, as well as in adaptation to the demand of the age, the University will prove itself deserving of no second rate position among the institutions of our land. It designs, by its instruction in Literature and Art; in Language, ancient and modern; in Mathematics pure and applied; in the Sciences, agricultural, physical, mental, moral and social; by its recitations, lectures, examinations and elevating influences, to educate, inform and discipline the student's mind; to strengthen his moral principles, and supply such general and generous, as well as special, culture as will best prepare him for success and usefulness in any pursuit or profession in life.

OPPORTUNITIES AFFORDED.

The work which the University is accomplishing can be readily understood from the Courses of Study prescribed in each of the departments as already set forth.

We call special attention, however, to some features of the following Departments, viz:

LAW AND MEDICINE.

The Board of Regents at their meeting in June, 1878, took the first step toward the creation of Departments of Law and Medicine in the University. A chair of Law and Equity, and also a chair of Anatomy, Physiology and Hygiene were established. Instruction in these chairs has been given regularly, ever since. The number of students in these Departments is gradually increasing, and as the fact of their establishment, and the advantages they offer become more generally known, attendance upon them will be greatly enlarged. These two Departments supply a long felt need in the University, and will materially increase the number of students, as well as elevate the character of the school.

THE MILITARY.

The law provides that five Cadets may be appointed for

each Senatorial District in the State. These are educated free of cost for tuition, books, stationery, etc. For such as desire a military and engineering education, this department is provided. Cadets, however, are not limited to this, but may pursue their studies in any Department of the University, subject to the general regulations laid down in the Code for the Cadets. Other students are permitted to drill, on condition that they provide themselves with the neat and becoming uniform of the corps. Drill occupies one hour on each of four days in the week. The United States Government liberally furnishes the special supplies required for this department. These are of the latest and most improved construction.

Applicants for admission to the Corps should address the Regent of the Senatorial District in which they reside, stating age, attainments, giving reference as to character, etc. Applicants must be between sixteen and twenty-one years of age. The members of the Cadet Corps are generally esteemed among the best scholars in the University.

THE PREPARATORY.

Comparatively few of our young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. This department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity of this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of Collegiate Study proper, or shutting out from the advantages of the Institution many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or, if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

Those who do not contemplate a full course can also here be furnished with instruction in such preparatory studies as they may desire to pursue.

OPTIONAL COURSE.

An Optional Course is allowed those students whose special tastes or necessities prevent them from graduating in any of the regular Departments. Parents and guardians of students who expect to attend the University are, however, earnestly advised to direct their studies with a view to entering one of the regular Departments. The attention of those who teach in our intermediate schools is also respectfully invited to this suggestion.

During the Spring term of each year (beginning on the second Wednesday of March), unusual facilities are provided for all who may desire, either to take a short and limited course, or to fit themselves for the higher grades of teaching, clerking, or other *specialties.* All needed assistance in this work being rendered by the several Professors of the University, superior advantages are thus afforded to all comers.

NORMAL INSTRUCTION.

When desired, classes are formed in the Theory and Practice of Teaching, under the charge of an able and experienced instructor. Lectures are from time to time delivered before the class by the several members of the Faculty. The daily contact of the students in the class-room with their teachers, observing their methods and studying their plans, affords fine opportunities in this department of instruction. Nowhere in the State are afforded better facilities for practical Normal drill. The graduates of the University have been remarkably successful in securing desirable positions as teachers, and have in almost every instance fully satisfied their employers, retaining their positions as long as they desired them. The Faculty of the University cheerfully render their assistance to capable students and graduates desiring positions as teachers.

REQUISITES FOR ADMISSION.

I. All candidates for admission to any department of the

University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must produce certificates of honorable dismission from the same. No person shall be admitted into the Senior Class after the beginning of the University year.

III. Those entering as Students for a degree in any department of the University, must sustain an examination in the various studies of the Preparatory School of the University, or their equivalent.

IV. Candidates for advanced standing must sustain an examination in the previous studies of the department which they desire to enter.

V. The regular examination for admission of candidates, who have not pursued the preliminary studies in the Preparatory Schools of the University, will take place on Friday, succeeding Commencement, and on the first day of the first term.

VI. Candidates should procure a copy of the printed laws of the University, also the Treasurer's receipt for tuition before presenting themselves for enrollment.

VII. Applicants for admission to the Preparatory Department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic through common fractions.

VIII. Students are required to pronounce Greek and Latin according the so-called Continental method.

EXAMINATIONS.

I. Each student, at the close of the Term, shall stand a public written examination upon all the studies which he has pursued during that term. No student shall be excused for non-attendance on such examination, except upon presentation of a reason which may be considered valid by the Faculty. No student who may be absent, and not thus excused, shall

be allowed to continue in connection with the University. If at the close of any term a student shall have failed to attain a standing of six, on a scale of ten, owing to a failure in examination, he shall be informed of the fact, and he may be allowed to stand a special examination under the same committee at any time before the beginning of the next college year.

II. The examination of each class shall be conducted by a committee composed of three members of the Faculty, who shall, within three days next preceding the examination, select a series of questions, not less than nine nor more than fifiteen, in number, and submit the same in writing to the class at the time of examination.

III. After examination the committee shall examine the papers and determine the standing made by each student in examination, which shall be considered the equivalent of one month's standing in recitation.

IV. Before a student shall be entitled to enter a higher class he shall, on a scale of ten, have attained a minimum standing of six in each study belonging to his class, which shall be determined by the average of his recitations and examinations.

V. Students who have not before been at the University should, on their arrival, report themselves to the President, and by him be assigned to such department and studies as they may desire and be prepared to enter. When a regular course of study is once adopted, the student is not allowed to vary from it, or change to another, without permission.

TUITION.

Tuition in the Preparatory Department,	$5 00	per term.
" other Departments	8 00	"
Contingent Fee in Preparatory Dep't,	2 00	"
" " Other Departments	2 00	"

Ministerial Students are admitted free.

BOARDING AND EXPENSES

THE UNIVERSITY HAS NO DORMITORIES. This is a matter both of necessity and policy; of necessity, because the State has not been able to furnish money to build dormitories; of policy, because it is thought better for the students to be distributed among the people of the University town, amenable to the common laws and sentiments of society. The public bounty stops at furnishing free instruction, leaving to private hands the providing of maintenance.

Three methods of boarding are practiced: (1) Self-boarding, by individuals, or, more commonly, by small groups or colonies composed of members of the same family, or of neighboring families. Rooms are hired, and furniture, provisions and fuel are brought from home. When well managed, this is an excellent and very economical mode of living. From $1.00 to $1.50 a week per pupil may be set down as the cost. (2) Club boarding. This has been practiced for some time and is an excellent system. A company of young men rent a number of rooms or an entire house and then organize and operate a boarding club. The price of boarding in clubs varies from $1.75 to $2.25 per week, including rent of room. (3) Boarding in families. The difficulties formerly encountered in procuring suitable places for students desiring to board in families, have disappeared. Good boarding can be found at reasonable prices ranging from $2.50 to $3.50.

Incidental expenses depend on the habits of the student. The law prohibits students' incurring debts at stores, groceries, etc., except on written order of parents, guardian or teacher. Unnecessary and lavish expenditures induce not only waste of time and means, but neglect of study and formation of bad habits.

The necessary expenses for the college year of forty-one weeks are less here than in any other place known to us, where the same quality of instructions and other equal advantages are furnished. *A young man of moderately economical habits need not spend more than* $175.00 *per year, including*

board, room rent, tuition, etc., and have every advantage afforded by the University.

PRIZES.

THE REGENTS PRIZES—To the student who shall write the best essay upon a given subject, $25.00. To the student who shall be adjudged the best declaimer, $15.00. These prizes to be awarded after public competition, by a committee of citizens appointed by the Faculty.

These were awarded at the last contest as follows:

Essay—S. B. Brown - - - - - -	$25 00.
Declamation—G. W. Davis - - - - -	15 00.

THE PRESIDENT'S PRIZES—In the annual contest of the Columbian and Parthenon Literary Societies, the President of the University offers the following prizes: To the successful Debator, $40.00; to the successful Orator, $25.00; to the successful Essayist, $25.00; to the successful Declaimer, $10.00. The prizes to be awarded by a committee selected by the Faculty.

DISCIPLINE.

The rules of the University require that every student shall be in his place at all stated exercises from the opening to the close of his connection with the University. A record is kept in which are entered the grade of scholarship of each student, his absence from the exercises of the institution, his tardiness or failure in recitation, unless satisfactorily accounted for. An abstract of this record, is sent at the close of each term to parents or guardians, so that they may see what and how their sons and wards are studying, and how they stand in scholarship and deportment. In case of negligence, irregularity, or other misconduct, the students will be privately admonished and the parents or guardian will be informed of the fact. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is especially called

the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his classmates that he be punctual in his place from the first day of the term till the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with those duties.

The government of the students proceeds upon an entirely Christian basis. Kindness, gentleness and trustfulness are relied upon, rather than sternness, impatience and suspicion. In such an atmosphere, all noble and manly qualities ripen, and students learn to demean themselves as Christian gentlemen. Students are encouraged and incited to form habits of economy, industry, self-reliance, truthfulness and purity, and thus to become a law unto themselves.

RELIGIOUS INSTRUCTION AND WORSHIP.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all the students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect. The institution is entirely free from sectarian control or domination.

In the internal management and practical working of the institution, there is not now, and never has been, the slightest denominational friction.

LIBRARY.

A respectable beginning towards a Unsversity Library has been made. About five thousand volumes have been carefully selected and placed on its shelves, including, not only many

choice and valuable books of reference, but also standard works in the various departments of History, Biography, Theology, Agriculture, Arts, Science and General Literature. During the past year, about three hundred and fifty volumes have been added by purchase to the Library, including a number of very valuable works on Literature and Science.

We respectfully request the friends of education to make contributions to its shelves. In addition to those hitherto granted, the following donations have been received during the year:

Hon. B. F. Martin, - - - - Public Documents.
Hon. J. B. Hoge, - - - Centennial Map of U. S.
Department of the Interior - - - Public Documents.
State Department - - - - - Public Documents.

Nearly all the weekly journals of the State, the Daily Wheeling *Register*, the Wheeling *Intelligencer*, and valuable religious papers of all leading religious denominations are gratuitously sent to the reading room of the University.

MUSEUM.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens in other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labelled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The vicinity of the University offers unrivalled advantages for the study of practical Geology. Especial attention is paid to this branch.

Additional provision has recently been made for the study of Practical Geology by means of an annual excursion of four weeks with Prof. White through portions of West Virginia and of surrounding States.

The laboratory of Practical Chemistry is in operation. The

instruction for the present is devoted chiefly to analysis, with its application to agriculture.

DONATIONS TO THE MUSEUM DURING THE YEAR.

W. W. Talbott—Concretion from Philippi, Barbour county.

D. H. Chadwick—Head of a Pike from Cheat River (fish weighing 42 lbs.)

A. W. Frederick—Indian implements from Preston county, found by David VanSickle.

T. S. Wiley—Quartz Pebbles from Preston county, found by Daniel Titchnell.

J. L. Johnston—Cyprea, from Pentress, Monongalia county.

T. H. Price, M. D.—Human fœtus.

UNITED STATES SIGNAL STATION.

By direction of General Meyer, Chief Signal Officer of the Army, a signal station has been established at the University for the benefit of Commerce, Agriculture and Science. It is, at present, in charge of Sergeant Sprigg, S. S., U. S. Army. Students are by this means furnished with special advantages for the study of Meteorology and related subjects. The frequent and carefully recorded observations taken by means of the most improved instruments will furnish accurate and reliable data for hereafter estimating climatic changes in West Virginia. By this means also, the newspapers, boards of trade and river men generally, at Pittsburgh, Wheeling and Cincinnati, if they so desire, can be reliably advised of special movements in the river at the head of navigation. Sergeant Sprigg also teaches Telegraphy and Signaling.

LITERARY SOCIETIES

There are two of these, (the Parthenon and Columbian,) in connection with the University, supplied with suitable halls, tastefully furnished, whose exercises in Composition, Reading, Orations, Debate and Criticism are, in many respects, of great advantage to the student. They also afford facilities for the study of, and acquaintance with, Parliamentary forms, and the acquisition of business habits. The authorities of the

University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries.

LOCATION.

Morgantown, the seat of the University, is beautifully located on the right bank of the Monongahela river, Monongalia county, West Virginia. The scenery around is exceedingly attractive and picturesque. The place has long been famous for its social, intellectual and moral culture, and general healthfulness. Coaches leave every morning to and from Fairmont, on the Baltimore and Ohio Railroad. There is also a daily conveyance between Morgantown and Uniontown, Pa. Steamboats from Pittsburgh arrive every day at Geneva, twelve miles below Morgantown, and Congress has made liberal appropriations for the continuance of slackwater navigation in the Monongahela as far as Morgantown. A place more eligible for the quiet and successful pursuit of Science and Literature is nowhere to be found.

GROUNDS AND BUILDINGS

The buildings are eligibly situated, and are admirably adapted to the purposes of the University. They are immediately outside, and within a few minutes walk of Morgantown. The campus is ample, and is a fine natural park. The grounds command a wide and noble prospect; the town, the river, the bridge, the mountains, all feast the eye and soul. The buildings are models of architectural beauty and convenience, and are *healthfully* constructed and heated. In addition to Preparatory Hall, the Armory has been furnished, and is now occupied. The splendid University Building has also been finished and furnished. Year by year, all the appointments of the University grow more desirable and attractive. It is surely winning its way to the lasting affection and deserved support of the people of West Virginia.

SCHOOL OF CHEMISTRY.

Upon recommendation of Professor Latham, the Regents have authorized the establishment in the West Virginia University of an extra curriculum course in General Chemistry and one in Analytical Chemistry. Students may take either or both of these, exclusively or otherwise, at their own pleasure. The aim is to afford opportunity for more extended study of these subjects than has been possible heretofore, and to facilitate the acquirement of practical acquaintance with Chemical Analysis, particularly that of ores, soils and fertilizers

It is the intention of the Regents to confer special diplomas on such students in this school as shall seem, after a rigid examination on Chemical Analysis, to deserve them.

For each of the courses a fee of twenty dollars *per session* will be charged.

This arrangement affords excellent advantages, which young men of West Virginia—a State abounding in all manner of mineral wealth—would do well to improve.

D. B. PURINTON,
Acting President.

SIGNAL SERVICE U. S. ARMY.

Division of Telegrams and Reports for the Benefit of Commerce and Agriculture.

Annual Means at Morgantown, W. Va., for the Year 1881.

1881.	BAROMETER.							THERMOMETER.							WIND.			Relative Humidity.	PRECIPITATION.	
	Mean.	Mean of. A. M. Observ.	Mean of. P. M. Observ.	Mean of. Night Observ.	Highest.	Lowest.	Range.	Mean.	Mean of A. M. Observ.	Mean of P. M. Observ.	Mean of Night Observ.	Maximum.	Minimum.	Range.	Prevailing Direction	Maximum Velocity.	Direction at times of Maximum Velocity.		Amount of Rain and Melted Snow in Inches.	No. of Days on which Rain or Snow Fell.
January	30.135	30.174	30 103	30.125	30.662	29.328	1.334	32.2	28.2	36.0	31.9	52.0	‡ 2.	54.0	S. W.	34.	W.	73.4	3.08	23
February	30.158	30.183	30.120	30.161	30.736	29.436	1.300	34.9	30.4	40.5	32 9	63.0	‡ 2	65.0	S. W.	40.	W.	66.3	3.56	15
March	29.793	29.813	29.752	29.809	30.334	‡29.256	1.078	40.5	37.8	45.8	40.7	64.0	25.	39.0	S. W.	44.	S. W.	63.6	2.12	21
April	29.951	29.964	29.909	29.966	30.383	29.558	.825	49.4	45.0	55.0	47.3	78.0	26.	52.0	S. W.	29.	N. W.	65.5	2.30	21
May	30.002	30 044	29 955	30.010	30.314	29.582	.732	66.0	60 9	73.3	62.0	85.0	39.	46 0	S. W.	27.	S. W.	69.2	3.28	9
June	29.886	29.910	29.844	29.896	30.180	29.541	.639	68.5	65 7	74.5	68 1	82.0	49.	33.0	S. W	†50.	W.	74.2	4.77	14
July	29.961	29 988	29.923	29.972	30.234	29 575	.659	72.8	69.6	79.8	69 0	89.5	55.	34.5	S. W.	36.	S E.	76.0	5.61	15
August	30.004	30.054	29.948	30.011	30.272	29.705	.567	71.4	64.5	82.3	67 3	82.8	60.1	22.7	S W.	28.	S. W.	68.6	.41	4
September	30.275	30.074	29 975	30.027	30.214	29.791	.423	72.1	66.5	81.2	68.5	†91.0	50.1	40.9	S. W.	32.	N. W.	72.8	2.78	9
October	30 112	30.153	30.070	30.113	30.501	29.612	.889	59.0	54.5	65.7	56.8	83.5	35.5	48.0	S. W.	20.	N.	77.0	4.55	16
November	30.156	30 201	30.122	30.146	†30.767	29.617	1.150	47.7	43.3	53.7	46.2	76.2	26.0	50.2	S. W.	35.	W.	67.7	3.19	14
December	30.134	30 154	30.103	30.144	30.630	29.534	1.096	43.1	40.3	48.0	41.1	68.0	21.5	46 5	S. W.	38.	W.	70.2	5.93	16
Annual Means	30.026	30 059	29.985	30.032			§1.511	54.8	50.5	61.3	52.6			§93.0	S W.		W.	70.4	3.46	*177

*Sum total. †Highest during the year. ‡Lowest during the year §Annual range.

GENERAL REMARKS.

January .....Remarkable for continuous snow on the ground. Ice gorges on 6th and 7th. Frost on 29th. No clear days.

February .....River gorged from 3d to 9th inclusive. High water on 8th and 21st. Frequent occurrence of snow and frost.

March.....Thunder storm on 12th. Considerable deficiency in barometric pressure. Solar halos, 16th, 25th, 29th. Lunar halos, on 7th.

April.....Frequent rains. Thunder storm on 29th Solar halos, 20th, 21st, 24th, 25th, 26th, 27th, 28th, 30th. Lunar halos, 7th, 10th, 15th. Trees budding on 17th.

May.....Thunder storms on 9th, 14th, 31st Solar halos, 1st, 3d, 4th, 12th. Lunar halos, 3d, 4th, 13th. Low water on 30th and 31st.

June.....Thunder storms on 13th, 17th, 20th, 29th. Solar halos of frequent occurrence. Lunar halos, 16th, 19th, 24th. Brilliant Comet visible 23d to 30th, inclusive.

July.....A large Meteor fell in this vicinity on 17th. Bright Comet visible throughout the month Thunder storms of frequent occurrence.

August.....Thunder storms frequent. Comet remained visible throughout the month. Low water in river. Deficit of rainfall.

September.... Brilliant Auroras occurred on the 12th and 15th. Solar halos on the 4th, 8th, 14th. Lunar halos 1st, 3d, 5th. Stormy weather.

October.....First frost of season on 5th. Solar halos 6th, 7th, 23d, 27th. Lunar halo 27th. Slight excess in temperature and rainfall.

November.....Frost occurred 10th, 15th, 17th, 23d, 29th. First snow fell on 4th. Solar halos 5th, 10th, 17th, 22d Lunar halos 2d, 5th, 6th.

December..... Solar halos 8th, 17th, 19th, 20th. Lunar halos 2d, 8th, 29th. Frost 11th, 16th, 17th, 18th, 19th, 20th, 24th, 26th. Excess of temperature and rainfall.

Prepared by authority of the Chief Signal Officer of the Army.

Morgantown, W. Va., March 16th, 1882.

J. C. SPRIGG, Jr., Serg't Signal Corps, U. S. Army.

CATALOGUE

—OF—

WEST VA. UNIVERSITY,

MORGANTOWN.

FOR THE YEAR 1882-3.

WHEELING:
CHAS. H. TANEY, STATE PRINTER.
1883.

Calendar.

The University year includes forty-one weeks, and is divided into three terms.

The FIRST TERM begins on the first Wednesday of September, the second on the fourth Wednesday of November, and the third on the second Wednesday of March.

The ANNUAL COMMENCEMENT is on the second Thursday of June.

Prompt attendance at the beginning of each term is very important to the student.

1883.

June 10th—Sunday, Baccalaureate Sermon.

11th—Monday, 8 P. M.—Regents' Prize Contest.

12th—Tuesday, 8 P. M.—Lecture before Students.

13th—Wednesday, 8 P. M. Address to the Literary Societies.

14th—Thursday, 9 A. M.—COMMENCEMENT; 2 P. M.—Anniversary of West Virginia Historical Society; 8 P. M.—Society Contest.

September 5th—Wednesday—Examination of Candidates for admission.

September 6th—Thursday—Session 1883–4, begins.

Board of Regents.

No. Dist.	Name of Regent.	P. O. Address.
1	WILLIAM P. WILLEY,	Wheeling.
2	JAMES MORROW, JR.,	Fairmont.
3	R. G. LINN,	Grantsville.
4	D. D. JOHNSON,	Long Reach.
5	JACOB L. ARMSTRONG,	Jackson C. H.
6	EDWARD A. BENNETT,	Huntington,
7	JOSEPH E. CHILTON,	Hamlin.
8	CAMERON L. THOMPSON,	Hinton.
9	D. CLINTON GALLAHER,	Charleston.
10	THOMAS J. FARNSWORTH,	Buckhannon,
11	JOSEPH MORELAND,	Morgantown.
12	JOHN A. ROBINSON,	Patterson's Creek.
13	DANIEL B. LUCAS,	Charlestown.

OFFICERS OF THE BOARD.

D. D. JOHNSON, PRESIDENT.
A. W. LORENTZ, TREASURER,
R. C. BERKELEY, SECRETARY.

EXECUTIVE COMMITTEE.

JOSEPH MORELAND, CHAIRMAN.
JOHN J. BROWN,
CLARENCE B. DILLE,
WM. C. McGREW,
E. SHISLER.

SECRETARY,

WM. C. McGREW.

SUPERINTENDENT OF GROUNDS AND BUILDINGS,

JAMES McM. LEE.

Faculty and Teachers.

WILLIAM L. WILSON, A. M., PRESIDENT,

Professor of Metaphysics.

D. B. PURINTON, A. M., VICE-PRESIDENT,

Professor of Mathematics.

ROBERT C. BERKELEY, M. A.,

Prof. of Ancient Languages and Literature, and Sec'y of Faculty.

JOHN I. HARVEY, A. M.,

Professor of Modern Languages and Literature, and Librarian.

F. S. LYON, A. M.,

Professor of English.

I. C. WHITE, A. M.,

Professor of Geology and Natural History.

FACULTY---CONTINUED.

A. W. LORENTZ, A. M.,

Professor of History.

ST. GEORGE T. BROOKE,

Professor of Law and Equity.

WOODVILLE LATHAM,

Professor of Agriculture, Chemistry and Physics.

B. W. ALLEN, M. D.,

Professor of Anatomy, Physiology and Hygiene.

JAMES S. STEWART, M. S.,

Instructor in Preparatory Department.

JAMES McM. LEE, A. M.,

Major and Commandant of Cadets, and Inst'r in Prep'y Dep't.

J. C. SPRIGG, JR., SERG'T S. C. U. S. A.,

Meteorological Observer and Instructor in Signaling and Telegraphy.

REV. THOS. B. HUGHES,

Chaplain.

WM. DANCER,

Janitor.

Students.

ABBREVIATIONS.

Met.—Metaphysics. Ma—Mathematics. A. L.-Ancient Languages. M. L.—Modern Languages. E.—English. H.—History. A.—Agriculture. C.—Chemistry. Ph.—Physics. Anat.—Anatomy, Physiology and Hygiene. G.—Geology. B.—Botany. Z.—Zoology. L. and E.—Law and Equity. Students still under the former curriculum are designated by their classes. Soph.—For Sophomore. Jr.—Junior. Sen.—Senior. Class.—Classical. Sci.—Scientific. Those who also have studies in the Preparatory Department—P.

ADAMS, NELSON D.....Tucker Co.....Met., A. L., E.
ALEXANDER, WILLIAM. A...Putnam Co.....P., E., A.
ANDERSON, WILLIAM F.....Monongalia Co...Jr., Class.
ARMSTRONG, ROBERT.....Putnam Co.....Sci., Soph.
ARMSTRONG, ROBERT A.....Upshur Co.....P., Ma., E.
BAKER, GEORGE C .....Monongalia Co.....Class., Sen.
BARB, W. T. W.....Monongalia Co....Met., Soph., Sci.
BAKER, GUY E. .....Monongalia Co....P., B.
BEE, JAMES A.....Doddridge Co.....P., Ma., E.
BERKELEY, ROBERT C., JR...Monongalia Co....A. L., M. L., Ph.
BERKELEY, WILLIAM N. JR..Monongalia Co.....A. L., Ma.
BAINBRIDGE, ANDREW M.....Taylor Co.....L. and E.
BENNETT, CLARENCE S.....Upshur Co.....L. and E., E.
BIRKETT, JAMES A.....Ohio Co.....P., H., E.
BLAND, WILLIAM T.....Lewis Co.....Sen., Sci.
BOGGESS, STANLEY T.....Harrison Co.....A. L., M. L.
BOUGHNER, A. BROWN.....Monongalia Co....P., E., M. L.
BOYERS, LUTHER M.....Monongalia Co....Class., Sen.
BOYERS, SIMON L.....Monongalia Co....A. L., Ma., E.
BRAND, EDWARD P.....Monongalia Co....Met., A. L., E., B.
BROWN, BENJAMIN.....Kanawha Co.....Class., Sen.
BROWN, CASSIUS C.....Monongalia Co....Ma., E., M. L.
BROWN, SAMUEL B.....Monongalia Co....Class., Sen.

STUDENTS—CONTINUED.

BUSH, ASA B.....Gilmer Co.....A. L., Ma., E., B.
CASTEEL, D. T. E.....Oakland, Md.....Class., Soph., M. L.
CORE, LEWIS.....Monongalia Co. . .A. L., Ma., E.
CORKE, JACOB F.....Harrison Co.....Class., Sen., Anat.
COX, FRANK. .....Monongalia Co....L. and E.
CRIM, EDWARD H.....Barbour Co.....P., Ma.
CUNNINGHAM, GEORGE F....Roane Co.....Met., L. and E., P.
COX, ISAAC F.....Marion Co.....P., Anat., E., B
COOPER, CHARLES N.....Wood Co.....Anat., Ma., M. L.
DAVIES, SAMUEL E.....Mason Co.....A. L., Ma., E.
DAWSON, JAMES E .....Uniontown, Pa....A. L., Ma., P.
DAWSON, RICHARD W.....Uniontown, Pa....A. L., Ma., P.
DURBIN, CHARLES R..... .Taylor Co.....P., H., E.
DEVINE, JOSEPH M.....Ohio Co.....M. L., Chem.
EAKIN, CLEMENT L.....Monongalia Co....G., B., Z.
EDWARDS, JOHN H..... ..... Vanderbilt, Pa.....Met., Ma., E.
ELLIOTT, EDWARD S.....Preston Co.....P., H., E., Ma.
FAST, RICHARD E.....Monongalia Co...L. and E.
FERRILL, WINFIELD S.....Calhoun Co.....P., Ma.
FLEMING, HARVEY.....Ritchie Co.....Class., Soph.
FLEMING, MELVILLE H.....Monongalia Co...A. L., Ma., E., M. L.
FOSTER, GEORGE B.....Monroe Co.....Class., Sen.
FORBES, WILLIAM H.....Ohio Co.....P., Anat.
GARDNER, ROBERT S. JR.....Harrison Co.....P., E.
GAINES, JOSEPH H.....Fayette Co.....Class., Soph.
GAINES, NATHANIEL W.....Fayette Co.....Class., Soph.
GOFF, CHARLES P.....Randolph Co.....P., M. L.
GWINN, W. M.....Summers Co.....L. and E.
HAYES, SAMUEL A.....Gilmer Co.....L. and E., A. L.
HOFFMAN, WINSTON H.....Baltimore, Md...P., A., H., Ma., E. M. L., B.
HARTIGAN, JAMES W .....Mineral Co.....Anat.. E., G., B., Z.
HOUGH, WALTER.....Monongalia Co...Class., Sen.
HUSTON, CHARLES R.....Monongalia Co...Ma., E.
HUGHES, MATTHEW S.....Ohio Co.....P., Anat., B., E.
HEATON, WM. H.....Ritchie Co .....L. and E.
JOHNSTON, JOHN L.....Monongalia Co...Sci., Sen.

STUDENTS---CONTINUED.

KEENER, JOSEPH L..... Monongalia Co.....P., H., E.
KELLEY, GEORGE M.....Monongalia Co.....G., B., Z., Anat.
LATHAM, PERCY.....Monongalia Co.....Anat., Chem.
LATHAM, GRAY.....Monongalia Co.....P , M. L.,Chem.,B.
LAWLESS, JAMES L .....Monongalia Co.....A. L., M. L.
LAWSON, G. L. C.....Taylor Co.....A. L., H , Ma , E., M. L.
LAWSON, ELIAS W.....Taylor Co.....A. L.,Ma.,E.,M. L.
LAZZELL, ISAAC G.....Monongalia Co.....Class., Sen., L. & E.
LYETH, JOSEPH H.....Berkeley Co.....P., H., E.
LYON, ELLIS.....Harrison Co.....H., P.
MCCUTCHEON, JOHN L.....Nicholas Co.....Class., Jr.
MEADOWS, BHURMAN W.....Gilmer Co.....Ma.,M.L.,P ,Chem.
MICHAEL, WALTER H.....Preston Co.....Class., Soph.
MUSGRAVE, JOHN E.....Mason Co.....Class., Sen., Anat.
MILLER, OWEN M..... ....Fayette Co.....Class., Jr.
NUTTER, MELVIN D .....Barbour Co.....Met , A. L., Ma., B.
O'BRIEN, DANIEL V.....Lewis Co.....Sci., Jr.
OGDEN, WILLIAM C.....Marion Co.....H., Chem.
POOL, GEORGE W.....Monongalia Co.....H., P.
PROTZMAN, SPURGEON H.....Monongalia Co.....A. L., Ma., E.
PROTZMAN, ALFRED L .....Monongalia Co.....H., E., P.
PURNELL, FRANK M.....Marshall Co.....Class., Jr.
PECK, MELVILLE.....Barbour Co.....L. and E.
PYLE, STEPHEN G.....Tyler Co.....E., P.
RECTOR, THOMAS G.....Wood Co.....P., H., E.
REED, DAVID K.....Taylor Co.....Class., Jr.
ROBINSON, HARRY L.....Uniontown, Pa.....Class., Jr.
ROHRBOUGH, IRVIN M.....Upshur Co.....Class., Soph.
RICH, WILLIAM. .....Monongalia Co.....L. and E.
SHAFER, WILLIAM C.....Wood Co.....P., H.
SHUGERT, GEORGE N.....Jefferson Co.....A. L., P., M. L.
SINSEL, CHARLES A.....Taylor Co.....P., E.
SMITH, JASPER W..... Monongalia Co.....Anat., Ma.
SNIDER, FRANK.....Monongalia Co.....A. L., H., Ma.
STEWART, ROBERT A..... ..Putnam Co.....P., Chem.
STEWART, WILEY B.....Monongalia Co.....P., B.

STUDENTS—CONTINUED.

STUART, WINFIELD S.....Doddridge Co.....Ma., M. L., E.
SWEENEY, JOHN D.....Tyler Co.....Sci., Soph., Met.
SPRIGG, WILLIAM M.....Washington, D. C..P., Anat.,Chem.
STRAUSZ, PHILIP H.....Preston Co.....P., Anat., Chem.
TALBOTT, EALEM D., JR.....Barbour Co.....L. and E.
TALBOTT, HENRY T.....Jefferson Co.....A. L.,Ma.,M. L.,E.
TAPP, ROBERT W.....Monongalia Co.....Soph., Class.
TENANT, LUTHER.....Monongalia Co.....P., Ma., E.
THOMAS, FRANK M.....Preston Co.....P., Ma.
TRIPPETT, L. H.....Calhoun Co.....P., E., Ma.
WATERS, NACY McG.....Preston Co.....P., Ma., E., M. L.
WELLS, S. P., JR.....Wood Co.....Sci., Sen.
WILLIAMS, ALEXANDER B....Greensboro, Pa.....P., Ma., E.
WILLIS, M. H.....Ritchie Co.....P., H., Ma.
WORKMAN, ROSECRANTZ.....Mineral Co.....P., B.
WILTSHIRE, JOHN W.....Jefferson Co.....L. and E.
WOODYARD, E. N .....Wood Co.....P., H., Ma.
YOKUM, HUMBOLDT.....Randolph Co.....Anat., A. L., Z., B.
YOST, ZOATH F.....Marion Co.....Ma., M. L., E.

Preparatory Department.

STUDENTS.

ALKIRE, WINFIELD SCOTT.....Lewis County.
ANDERSON, JAMES EVANS.....Monongalia County.
ARMSTRONG, BRUCE..... .....Preston County.
BOYD, GEORGE EDWARD, JR..... .....Ohio County.
BRAND, HARVEY.....Monongalia County.
COBURN, WILLIAM SHERMAN.....Monongalia County.
COX, JAMES D..... .....Marion County.
CUNNINGHAN, GEORGE W.....Monongalia County.
DAWKINS, ARTHUR DEMPSEY.....Jackson County.
DICKSON, HUGH ARLINGTON.....Monongalia County.
DYE, W. T. WILLEY.....Ritchie County.
ECHART, THOMAS LAYTON.....Monongalia County.
GORMAN, ALFRED CLARENCE.....Monongalia County.
GRIM, WILSON OSBURN.....Upshur County.
HARMISON, CHARLES C.....Hampshire County.
HEFNER, MATTHEW WALLACE.....Braxton County.
HUGHES, WILLIAM FRANK.....Monongalia County.
HUGHES, EDWIN HOLT.....Monongalia County.
HURLEY, EDWARD DANIEL.....Allegheny County, Md.
JACKSON, ROBERT EDWARD.....Lewis County.
JACO, LIN MILTON.....Monongalia County.
JOHNSON, WILLIAM JACOB.....Harrison County.
JONES, WILLIAM.....Fayette County, Pa.
KELLEY, EDWIN WRIGHT.....Maryland.
KIRKHART, JAMES ANTHONY.....Monongalia County.
LYON, ELLIS..... Harrison County.
LYONS, WILLIAM ALEXANDER.....Monongalia County.
MCCLUNG, MARSHALL G.....Pendleton County.
MCCOMAS, HENRY M.....Oakland, Md.
MCCOY, THEOPHILUS.....Barbour County.
MUSGRAVE, ASA M.....Mason County.
PELL, MILLARD.....Preston County.

STUDENTS—Continued.

Rhodes, William Erasmus..... Lewis County.
Sheerer, James Calvert..... Jefferson County.
Sturgis, John Henry.....Fayette County, Pa.
Tucker, William Anderson.....Monongalia County,
Vandal, Calhoun Smith.....Roane County.
Vandegrift, Robert Martin.....Tyler County.
Vandervort, Frank.....Monongalia County.
Van Gilder, George Ethelbert.....Monongalia County.
Warden, Samuel Watson.....Taylor County.
Warden, Frank R.....Taylor County,
White, Marshall Virginius.....Ohio County.
White, William James.....Monongalia County.
Yost, De Laniel Lee.....Marion County.

NUMBERS IN THE SEVERAL SCHOOLS.

Chemistry	15
Agriculture	5
Physics	8
Anatomy, Physiology and Hygiene	11
Zoology	9
Geology	15
Botany	16
English	62
Metaphysics	18
Mathematics	52
Ancient Languages	34
Modern Languages	44
History	15
Law and Equity	13
Preparatory Department	45
Some study in Preparatory Department	38

Recapitulation

BY COUNTIES IN WEST VIRGINIA.

Berkeley	1
Barbour	5
Braxton	1
Calhoun	2
Doddridge	2
Fayette	3
Gilmer	3
Hampshire	1
Harrison	6
Jackson	1
Jefferson	4
Kanawha	1
Lewis	5
Marion	5
Marshall	1
Mason	3
Mineral	2
Monongalia	51
Monroe	1
Nicholas	1
Ohio	6
Pendleton	1
Preston	7
Putnam	3
Randolph	2
Ritchie	4
Roane	2
Summers	1
Taylor	8
Tucker	1
Tyler	3
Upshur	4
Wood	5
Total	146

RECAPITULATION BY STATES.

West Virginia	146
Pennsylvania	7
Maryland	5
District of Columbia	1
Total	159

The following is an exhibit of the number of students enrolled annually from the beginning:

The year 1867–8, shows a total of 124.
The year 1868–9, shows a total of 154.
The year 1869–70, shows a total of 161.
The year 1870–1, shows a total of 166.
The year 1871–2, shows a total of 159.
The year 1872–3, shows a total of 144.
The year 1873–4, shows a total of 138.
The year 1874–5, shows a total of 125.
The year 1875–6, shows a total of 96.
The year 1876–7, shows a total of 93.
The year 1877–8, shows a total of 118.
The year 1878–9, shows a total of 135.
The year 1879–80, shows a total of 132.
The year 1880–1, shows a total of 162.
The year 1881–2, shows a total of 177.
The present year 1882–83, shows a total of 159.

Degrees and Certificates.

The following Degrees were conferred at the last Commencement:

MASTER OF ARTS.

GEORGE D. PURINTON, WILLIAM A. ROGERS.

MASTER OF SCIENCE.

SPENCER S. WADE.

BACHELOR OF ARTS.

THOMAS R. BOYD, ZALMAN K. BROWN,
DAVID H. COURTNEY, THEOPHILUS E. HODGES,
ELIAS D. JEFFRIES, GEORGE C. LEWIS,
JAMES H. STEWART.

BACHELOR OF SCIENCE.

ARTHUR L. COX, JAMES H. LAWHEAD.

CERTIFICATES OF PROFICIENCY

In Law Department.

ARTHUR L. COX, L. CAMPBELL TABB.

Vocal Music.

D. B. PURINTON, A. M., Instructor.

Some years ago, the Regents added Vocal Music to the Studies of the University. It is open, free of charge, to the students of all departments alike. The course of instruction embraces one year, as follows:

Fall Term—Rudiments and Elementary Practice.

Winter Term—Rudiments continued. Glee and Chorus Singing.

Spring Term—Lectures on Harmony and Composition, Chorus Singing, Review, &c.

Students.

Armstrong, R.
Brown, S. B.
Cunningham, G. W.
Dawkins, A. D.
Ferrell, W. S.
Hefner, M. W.
Jackson, R. E.
McCoy, T.
Musgrave, E. C.
Nutter, M. D.
Peck, M.
Pell, M.
Sinsel, C. A.
Thomas, F. M.
Willis, M. H.
Workman, R.
Yost, D. L. L.

Course of Study.

The Board of Regents, at the annual meeting in June, 1882, acting upon the unanimous request of the Faculty, abolished the Curriculum and distributed the course of study into ten independent Schools, of which eight are academic and two professional. The object of this change is to allow greater freedom in the selection of studies and to elevate the standard of instruction and attainment.

But while the course is elective, the Faculty will advise students as to the choice and arrangement of their studies, and always encourage a complete and regular course.

Each student in the academic Schools is required to attend at least three Schools, and to adhere throughout the session to the studies selected on his matriculation, unless the Faculty, for cause shown, allow him to attend a less number or to make an exchange.

Students will be classed in the several Schools, according to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

ADVANTAGES OF THIS SYSTEM.

It is believed that this change, while producing some confusion and misconception at the outset, will eventually make the University more useful in the work of higher education and commend it to a wide patronage in the state, and while adapting its courses to the want of preparation or the irregular preparation of so many of the youths who seek liberal culture, will make its degrees attainable in the time usually required for the curriculum courses, or, in less time, if the student enters well advanced and is diligent in study.

Its advantages to the student are that he may pursue the studies of any School for which he is prepared, without regard to his deficiency in other studies; that he receives his diplomas in the several Schools in the order in which he completes them; that if he is able or desires to take but a partial course,

he may adapt that course to his tastes or his necessities in life; and that he is put upon a footing of social equality with his fellows, and thrown upon his individual efforts, as will soon happen in actual life, for success and distinction in academic study.

The academic Schools are as follows:

I. Metaphysics.
II. Mathematics.
III. Ancient Languages.
IV. Modern Languages.
V. English.
VI. Geology and Natural History.
VII. History.
VIII. Agriculture, Chemistry and Physics.

The Professional Schools are:

I. Law and Equity.
II. Anatomy, Physiology and Hygiene.

The following is a statement of the organization and work of the several Schools:

I—SCHOOL OF METAPHYSICS.

President Wilson.

In this School there are six recitations per week. The subjects taught are Psychology, Logic and Ethics. The method of teaching is by text-book, familiar lectures and parallel readings. Where there are conflicting theories, the attempt is made to acquaint the student with the arguments for and against, and to encourage to personal investigation and independent judgment.

Psychology: This class begins with the study of the physiology of the nervous system as related to the phenomena of mind, and proceeds with the study of The Intellect, The Sensibilities and The Will.

Text Books and Books of Reference: Porter's Intellectual Science, Bain's Mind and Body, and Mental Science, Hopkins' Outline Study of Man.

Logic: The Text Book is Jevon's Logic, with frequent reference to Mill on Induction.

Ethics: The several theories of Morals are studied and discussed. The Text Book is Calderwood; with reference to the Ethical writings of Wayland, Hopkins, Mill, Leslie Stephen and others.

Instruction is also given in this School in the Evidences of Christianity.

II—SCHOOL OF MATHEMATICS.

PROF. PURINTON.

The School of Mathematics includes studies in Pure and Applied Mathematics, as follows: Algebra, Geometry, Trigonometry (Plane and Spherical), Mensuration, Surveying, Navigation, Analytical Geometry, Differential and Integral Calculus, Mechanics and Astronomy.

The course of instruction consists of three years:

Junior Year: Algebra, Geometry, Trigonometry.

Intermediate Year: Mensuration, Surveying, Navigation, Analytical Geometry, Calculus.

Senior Year: Analytical Mechanics, Astronomy.

Instruction is given by means of lectures, class exercises, and original work by the student. Original problems and practical exercises are required in Trigonometry, Mensuration, Surveying, Topography and Astronomy.

Such useful instruments as the Compass, Transit, Sextant and Telescope are placed in the hands of the student and ample opportunity is given for becoming acquainted with their proper manipulation and their practical use.

Students are expected to have a good knowledge of Arithmetic, Elementary Algebra, and the first four books of Geometry, before entering this school.

III—SCHOOL OF ANCIENT LANGUAGES.

PROF. BERKELEY.

The subjects taught in this school will be:

I The Latin Language and Literature, in which there will be three classes, viz.: *Junior*, *Intermediate* and *Senior*.

Text Books used.

1. *Junior Class*—Virgil's, Bucolics and Georgics, Horace, Odes and Epodes; Cicero de Senectute and De Amicitia, and Gildersleeve's or Allen's Latin Grammar and Exercise Book.

2. *Intermediate Class*—Horace, Satires and Epistles, Livy, and Latin Prose Composition, and Grammar.

3. *Senior Class*—Cicero de Officiis, Tacitus, and exercises in Latin Composition. In this class a private course of parallel reading will be prescribed.

Lexicons Recommended for Each Class—White's, Andrews', or Freund's Leverett's.

II. The Greek Language and Literature; in which there will be also three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used.

1. *Junior Class*—Herodotus, Homer's Iliad and Odyssey; Jones' or White's Greek Prose Composition, and Goodwin's Grammar.

2. *Intermediate Class*—Xenophon's Memorabilia, Plato's Apology and Crito, Boise's Greek Syntax, or Sidgwick's Greek Prose Composition, and Goodwin's Grammar.

3. *Senior Class*—Euripides, Demosthenes, Sophocles, and Exercises in Greek Composition. A private course of parallel reading will also be prescribed for this class.

Lexicon for Each Class—Liddell and Scott's. The abridged edition for the Junior Class. The unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

IV—SCHOOL OF MODERN LANGUAGES.

PROF. HARVEY.

In this School are taught French and German. In each language there are two classes, junior and senior. The junior classes are thoroughly drilled in the Etymological forms and are practiced in the simpler forms of Syntax. The aim in the senior classes is to give facility and accuracy in translation. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the senior classes.

Text Books.

Junior French.—Otto's Grammar; Smith's Reader; Telemachus, Picciola, or selections from modern authors.

Senior French.—Voltaire's Charles XII, Corneille's Cid, Racine's Athalia, Moliere's Misanthrope, Hugo's Hernani, Brachet's Grammar, and Saintbury's Literature.

Junior German.—Cook's Otto's Grammar, Otto's Reader, Schiller's Jungfrau or Wilhelm Tell.

Senior German. — Goethe's Iphigenia, Fouque's Undine, Goethe's Hermann und Dorothea, Lessing's Minna von Barnheim, Cook's Grammar, and Conant's Literature.

Reference Books.

French.—Spiers and Surenne's, or Gasc's Dictionary; Brachet's Historical, or Wall's Student's Grammar; Van Laun's Literature.

German.—Adler's, or Whitney's Dictionary; Whitney's or Brandt and Hart's Grammar; Hosmer's, or Harrison and Gostwick's Literature.

V—SCHOOL OF ENGLISH.

PROF. LYON.

This School has at present a course of two years, embracing the analysis and history of the language; Rhetoric, Theoretical and Practical; English Literature, with critical examination of authors; the elements of criticism and elocution, consisting of practical drill in the elements, cultivation of the voice, reading and declamation.

JUNIOR YEAR.

Analysis and History, Elements of Rhetoric, English Literature and Elocution.

SENIOR YEAR.

Rhetoric, English Literature, Elements of Criticism, and Elocution. Political economy is also temporarily assigned to this school.

Text Book and References.

Analysis, Greene; Rhetoric, Hill, Campbell, Whately; English Literature. Baldwin, Shaw, Tyler's Morley; Elements of Criticism, Kames; Elocution, Mitchell, Raymond.

Political Economy; Chapin's Wayland, Bowen, Perry, Roscher.

VI—SCHOOL OF GEOLOGY AND NATURAL HISTORY.

PROF. I. C. WHITE.

This School includes Botany, Zoology, and Geology, and requires two years for the completion of the course.

First Year—During the first year Botany and Zoology will be studied, and instruction in each will be given thrice every week of the Winter and Spring Terms. In addition to a full theoretical knowledge of these subjects, a stated amount of practical work in analyzing and classifying plants, and in dissecting and skeletonizing animals will be required during the Spring Term.

Text Books—Botany—Gray's School and Field Book, and Bessey's Structural Botany; Sach's for reference.

Zoology—Packard. For reference, the works of Darwin, Wallace, Mivart, ond others.

Second Year—Geology will form the subject of study during this year, and instruction in it will be given three times a week from the beginning of the Winter Term until the commencement (about the 1st of May) of the Senior vacation. During this vacation a four weeks' excursion will be made through West Virginia and adjoining States, for the purpose of acquiring a knowledge of Practical Geology, the tracing and identification of minerals, the construction of sections, etc. This excursion (the necessary expenses of which never exceed fifty dollars), is open to all who pursue the study of Geology, but is required only of those who expect to graduate in the Scientific Department of the University, or to obtain the diploma of this School.

Text Book—Leconte's Elements of Geology. For reference, Dana's Manual, Lyell's Principles, and Geike's Text Book.

VII—SCHOOL OF HISTORY.

PROFESSOR LORENTZ.

The study in this School, for the present, will be embraced in a course of one year.

Instruction will be given from text books on the History of the United States, General History, and the History of Civilization in Europe, to which will be added collateral information, bearing on the various subjec's, drawn from other sources than the text book used.

VIII—SCHOOL OF AGRICULTURE, CHEMISTRY AND PHYSICS.

PROF. LATHAM.

In this School there are four separate departments, to-wit: General Chemistry, Analytical Chemistry, Physics and Agriculture.

1. The class in General Chemistry meets five times a week throughout the session. The subjects presented are the laws of chemical combination, the origin, properties and relations of chemical elements and compounds, and the doctrines of modern chemical philosophy, with incidental allusion to the applications of chemistry in pharmacy, medicine and the arts.

Texts.—Williamson's "Chemistry for Students," Attfield's "Chemistry, General, Medical and Pharmaceutical," Drechsel's "Chemical Reactions." Tilden's "Introduction to Chemical Philosophy."

II. The class in Analytical Chemistry studies, under the direction and guidance of the instructor, chemical manipulation, and qualitative and quantitative analysis. The laboratory, which is well equipped with modern appliances, is open for the purpose three days, every week during the session—four hours a day.

Texts—Thorpe and Muir's Qualitative Analysis, Woehler's Mineral Analysis, Plymptom's Guide to Use of the Blow-pipe, Prescott's Proximate Organic Analysis, Naquet's Legal Chemistry.

III. The class in Physics meets three times a week throughout the session. The various branches of the subject are discussed as fully as may be; stress being laid upon the importance of a clear comprehension of the elementary facts and principles.

Texts—Gage's Elements of Physics, Deschanel's Natural Philosophy (reprint).

For Reference—Weinhold's Experimental Physics (reprint).

IV. The class in Agriculture meets twice a week during the latter half of the session. The University lacks the means for instruction in practical agriculture, and all that is attempted with students of this class, is to acquaint them with some of the principles, chemical and physiolqgical, underlying successful farm practice.

Texts—Pendleton's Scientific Agriculture, Johnson's "How Crops Grow," and "How Crops Feed."

IX—SCHOOL OF LAW AND EQUITY.

PROFESSOR BROOKE.

The full course will embrace Common and Statute Law, Mercantile Law, Equity, Evidence, and Constitutional and International Law.

The Text-Books used in the course of Common aud Statute Law will be Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, and for *reference* the Code of West Virginia, and the subsequent Acts of the West Virginia Legislature.

In the branch of Equity, Evidence and Mercantile Law, the books will be Adams Equity, the 1st Volume of Greenleaf on Evidence, and Smith's Mercantile Law.

These Text Books will be supplemented by lectures each week, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The Text Book used in Constitutional Law will be the "Foederalist." This, however, will be supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions will also be the subject of lectures.

The Text Book used in International Law will be Woolsey's Introduction to the Study of International Law. Each day

before the lecture, there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the Text Book as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing. The decree of Bachelor of Laws will hereafter be conferred upon graduates of this School.

X—SCHOOL OF ANATOMY, PHYSIOLOGY AND HYGIENE.

PROF. ALLEN.

This department has been laboring under certain difficulties since its establishment, which are now being rapidly overcome. The foundation has been laid and in a few years a museum will be formed of which the state may be proud. Under the new order of things this department has had during the season of 1882–3, more *bona fide* medical students than ever before.

The aim is to teach Anatomy thoroughly, practically, as well as can be done anywhere. Subjects are provided for dissection for the students.

Physiology and Hygiene are taught, as is Anatomy when practicable, by specimens, the microscope, drawings, lectures, etc. The examinations are conducted in writing at the close of the session. Daily examinations, which are oral, are held throughout the term.

Members of the class who give evidence at the final examination of successful study will receive CERTIFICATES OF PROFICIENCY in the branches taught.

Diplomas and Certificates.

I. A Certificate of Promotion will be given to each student who attains a standing of 7.5 on a scale of 10 for one year's continuous study in junior or intermediate classes.

II. A Certificate of Proficiency will be awarded for satisfactory attainments in the entire studies of any School, or completed subject therein.

III. A Diploma will be conferred on each student who attains a standing of 7.5 on a scale of 10 during the entire course in any one of the following subjects: Latin, Greek, French, German, Chemistry, Physics, Geology, Natural History, Analytical Chemistry.

IV. A Diploma will be granted to each student who completes the entire course in any Academic School with a standing of 7.5 on a scale of 10 in the senior class or classes thereof.

Students attaining a standing of 6. are allowed to pass from a lower to a higher class.

Degrees.

The University degrees are the following:

Bachelor of Science, B. S.

Bachelor of Arts, A. B.

Master of Arts, A. M.

Bachelor of Laws, B. L.

The degree of Bachelor of Science requires: Diplomas in the Schools of Metaphysics, Modern Languages, English, Geology and Natural History, Agriculture, Chemistry and Physics, Mathematics.

Latin or Greek may take the place of one of the Modern Languages; History or Constitutional and International Law the place of senior English.

The degree of Bachelor of Arts requires: Diplomas in the Schools of Metaphysics, Ancient Languages, English, His-

tory, and DIPLOMAS in Geology or Natural History, Chemistry or Physics, CERTIFICATE OF PROMOTION in Intermediate Mathematics.

Chemistry or Physics may take the place of History.

CERTIFICATE OF PROMOTION in a Modern Language may take the place of senior Latin or senior Greek.

The degree of Master of Arts requires DIPLOMAS from all the Academic Schools, also CERTIFICATES OF PROFICIENCY in Constitutional and International Law, and Physiology. A satisfactory general examination on all subjects studied will be required of students for this degree.

Candidates for any of the foregoing degrees must submit to the Faculty a suitable essay or oration to be delivered on Commencement day, if required.

The degree of Bachelor of Laws is conferred on graduates of the School of Law and Equity.

MILITARY DEPARTMENT.

In this Department no changes have been made. Under the law of the State, five cadets may be appointed from each Senatorial District by the Regent for said district, who receive tuition, books and stationery free, but not more than three can be appointed from any one county, and books and stationery are not furnished to professional students.

Such cadets must be not less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them, undoubted evidence of fair moral character.

The following table will show the counties composing the several districts; the names of the Regents for each district are prefixed to this catalogue:

District I.	Hancock, Brooke, Ohio.
District II.	Marshall, Wetzel, Marion.
District III.	Ritchie, Doddridge, Harrison, Gilmer, Calhoun.
District IV.	Tyler, Pleasants, Wood, Wirt.
District V.	Mason, Jackson, Roane.
District VI.	Putnam, Cabell, Wayne.

District VII. Lincoln, Boone, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII. Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX. Kanawha, Clay, Nicholas, Braxton, Webster.
District X. Lewis, Randolph, Upshur, Barbour, Taylor, Tucker.
District XI. Preston, Monongalia.
District XII. Hampshire, Hardy, Grant, Mineral, Pendleton.
District XIII. Berkeley, Jefferson, Morgan.

Besides the State Cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All Cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause. Drill occupies one hour on each of four days in the week. A neat uniform of cadet grey is worn, which includes a fatigue suit, which may be worn constantly, and is more economical than ordinary citizens' dress. Cadets may keep this in view in bringing clothes with them. Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term. The University has an ample equipment for both infantry and artillery, and is supplied with amunition by the State. A new magazine was constructed in 1882.

In addition to the daily drills as Infantry or Artillery, the Cadets are theoretically instructed in Military Science, as follows:

FIRST YEAR.

First Term—Infantry tactics; School of the Soldier; School of the Company.
Second Term—Instruction for Skirmishers; Battalion Drill.
Third Term—Military Signaling—(Meyer's).

SECOND YEAR.

First Term—
Second Term—Military History.

Third Term—Artillery Tactics.

THIRD YEAR.

First Term—Artillery Tactics, (concluded).

SECOND TERM—Military Engineering (Mahan's); Field Fortifications (Mahan's).
THIRD TERM—Advance Guard and Outpost Duty—(Mahan's).

FOURTH YEAR.

FIRST TERM—
SECOND TERM—Ordnance and Gunnery—(Benton's).
THIRD TERM—Military Law and Courts Martial—Benit's.

The above course is seldom taken in full, but officers of the corps are required to study and undergo examination upon Military Engineering, Field Fortification, Advance Guard and Outpost Duty, and Military Law and Courts-Martial.

The annual course in drill for the entire Corps is as follows:

FIRST TERM—Schools of the Soldier, Company and Battalion, including Bayonet Exercises, Skirmish Drill and Target Practice.
SECOND TERM—Artillery—Manual of the Piece and Sabre Exercise.
THIRD TERM—Artillery—School of the Battery Dismounted; Guard Duty; Courts-Martial.

Dress Parades, Reviews, Inspections, and Guard Mountings, are held at least once a week.

The other studies in this Department are those of the classical or the Scientific Departments respectively.

SCHEDULE OF CLASSES AND HOURS.

	9—10 A. M.	10—11 A. M.	11—12 M.	2—3½ P. M.	3½—5 P. M.
MONDAY.	Sen. English. Jun. Math. Sen. Greek.	Sen. Latin Jun. French, Int. Math. History,	Jun. Greek. Jun. English. Sen German.	Metaphysics. Medicine. Sen. Nat. History.	Chem. Law.
TUESDAY.	Sen. English. Jun. Math. Int. Latin.	Jun. Latin. Sen. French. Sen. Math. History.	Int. Greek. Jun. German. Jun. English.	Metaphysics. Medicine. Jun. Nat. Hist.	Physics. Law.
WEDNESDAY.	Sen. English. Jun. Math. Sen. Greek.	Sen. Latin. Jun. French. Int. Math. History.	Jun. Greek. Sen. German. Jun. German.	Metaphysics. Medicine. Sen. Nat. Hist.	Chem. Law.
THURSDAY.	Sen. English. Jun. Math. Int. Latin.	Jun. Latin. Sen. French. Sen. Math. History.	Int. Greek, Jun. German. Jun. English.	Metaphysics. Medicine. Jun. Nat. Hist.	Physics. Law.
FRIDAY.	Sen. English. Jun. Math. Sen. Greek.	Sen. Latin. Jun. French. Int. Math. History.	Jun. Greek. Sen. German. Jun. English.	Metaphysics. Medicine. Sen. Nat. Hist.	Chem. Law.
SATURDAY.		Jun Latin. History. Sen. French.	Jun. German. Jun. English.	Metaphysics. Medicine. Jun. Nat. Hist.	Physics. Law.

*Changes will be made in this schedule from time to time, when necessary, to remove, as far as possible, any serious conflict.

PREPARATORY DEPARTMENT.

JUNIOR YEAR.

FIRST TERM.

Geography—Guyot's Common School; Map Drawing.
Arithmetic—Stoddard's Complete.
English Grammar—Etymology.
Latin (commenced).

SECOND TERM.

Geography—Guyot's (continued); Map Drawing.
Arithmetic (continued).
English Grammar—Syntax and English Composition.
Latin—Grammar and Reader.

THIRD TERM.

Arithmetic (completed).
English Grammar—Analysis, Prosody, and English Composition.
Latin—Grammar and Readers.
Greek—First Book.

SENIOR YEAR.

FIRST TERM.

Algebra—Robinson's Elementary, to Involution.
Book-keeping.
Cæsar (two books)—Latin Grammar.
Greek—Grammar and Reader.

SECOND TERM.

Algebra—Robinson's Elementary (completed).
History of the United States—Anderson's.

Cicero's Orations (three orations)—Bullion's Latin Grammar.
Greek—Grammar and Reader.

THIRD TERM.

Geometry—Robinson's (first four books).
History of the United States (completed).
Virgil—Three Books of Æneid; Latin Grammar.
Xenophon's Anabasis (two books). Greek Grammar.

Regular lessons in Writing, Spelling, Elocution and English Composition from beginning,

The studies preparatory to the Agricultural Department are as follows:

First Term—Algebra; Arithmetic; Grammar; Geography.

Second Term—Algebra; Arithmetic; Grammar; History U. S.

Third Term—Geometry; Arithmetic; Grammar; History U. S.

SCHEDULE OF DAILY RECITATIONS.

PREPARATORY DEPARTMENT.

FIRST TERM.

YEAR.	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.	FIFTH HOUR.
Senior Year	Algebra	Greek Reader	Cæsar.	Book-keeping.	
Junior Year	Geography	English Grammar 1st. English Grammar 2d.	Latin Lessons. Latin Lessons.	Arithmetic.	Reading or Writing.

SECOND TERM.

Senior Year	Algebra.	Cicero.	Greek Reader.		
Junior Year	Geography.	Latin Reader. Latin Reader.	Arithmetic.	English Grammar.	Reading or Writing.

THIRD TERM.

Senior Year		Anabasis.	Virgil.	Geometry.	
Junior Year	Arithmetic.	Greek Lessons.	Latin Reader. Latin Reader.	English Grammar.	Reading or Writing.

Military Department.

FACULTY.

WM. L. WILSON, A. M.,
President.

JAS. McM. LEE, A. M.,
Major and Commandant.

ROSTER OF CADETS AND OFFICERS.

BATTALION STAFF.

CADET D. U. O'BRIEN, ... Adjutant.
CADET C. N. COOPER, ... Sergeant Major.

ORDNANCE DEPARTMENT.

CADET S. P. WELLS, ... Captain of Artillery.
CADET D. U. O'BRIEN, ... Chief of Ordnance.

COLOR GUARD.

CADET J. E. MUSGRAVE, ... Sergeant.
CADET A. M. BAINBRIDGE, ... First Corporal.
CADET S. A. HAYS, ... Second Corporal.
CADET W. H. MICHAEL, ... Third Corporal.

COMPANY OFFICERS.

COMPANY "A."

CADET G. C. BAKER, ... Captain.

CADET W. T. BLAND, ... First Lieutenant.
CADET B. BROWN, ... Second Lieutenant.

NON-COMMISSIONED OFFCERS.

CADET H. FLEMING, ... First Sergeant.
CADET R. W. TAPP, ... Second Sergeant.
CADET R. ARMSTRONG. ..... Third Sergeant.
CADET J. A. BIRCKET, ... First Corporal.
CADET M. S. HUGHES, ... Second Corporal.

COMPANY "B."

CADET S. P. WELLS, ... Captain.
CADET J. L. JOHNSTON, ... First Lieutenant.
CADET I. G. LAZZELL, ... Second Lieutenant.

ROSTER OF STATE CADETS.

No. of District.	Name.	County.	Enlisted.	Status.	Furloughed or Discharged.
I.	Brown, S. B.*	Preston	Sept. 19, 1879	Present	
	Adams, N. D.	Tucker	March 8, 1881	Present	
	Birkett, J. A.	Ohio	Dec. 5, 1881	Present	
	Hughes, M. S.	Ohio	April 28, 1882	Present	
	White, M. V.	Ohio	Feb. 5, 1883	Present	
II.	Yost, Z. T.	Marion	Sept. 20, 1881	Present	
	Lawson, E. W.	Taylor	Sept. 12, 1881	Present	
	Cox, I. S.	Marion	March 24, 1882	Present	
	Cox, James D.	Marion	May 5, 1883	Present	
	Vacancy				
III.	Fleming, H.	Tyler	March 31, 1880	Present	
	Bee, Jas. A.	Doddringe	Sept. 6, 1882	Present	
	Willis, M. H.	Ritchie	Sept. 15, 1882	Furloughed	April 7, 1883.
	Gardner, R. S., Jr.	Harrison	March 13, 1883	Present	
	Johnson, W. J.†	Harrison	March 23, 1883	Deserted	Feb. 26, 1883.
	Dye, W. T. W.	Calhoun	Oct. 4, 1881	Hon. disch'd	Dec. —, 1882.
	Vacancy				
IV.	Sweeney, J. D.	Tyler	March 31, 1880	Present	
	Stuart, W. S.	Doddridge	Sept. 7, 1881	Present	
	Pyle, S. G.	Tyler	Sept. 7, 1881	Hon. disch'd	
	Vandegrift, R. M.	Tyler	March 14, 1883	Present	
	Vacancy				
	Vacancy				
V.	Musgrave, J. E.*	Mason	April 11, 1879	Present	
	Musgrave, E. C.	Mason	Sept. 20, 1882	Hon. disch'd	Jan. 6, 1883.
	Vandal C. S.	Roane	Sept. 20, 1882	Present	
	Three vacancies				
VI.	Armstrong, R.	Putnam	April 11, 1879	Present	
	Alexander, W. A.	Putnam	Oct. 1, 1882	Present	
	Bennett, C. S.	Upshur	March 8, 1882	Present	
	Stewart, R. A.	Putnam	Sept. 6, 1882	Present	
	Vacancy				
VII.	Brainbridge, A. M.	Taylor	Sept. 29, 1880	Present	
	Gaines, J. H.	Fayette	Sept. 12, 1880	Hon. disch'd	Dec. 21, 1882.
	Four vacancies				
VII.	Baker, G. C.*	Monongalia	March 8, 1878	Present	
	Bland, W. T.*	Lewis	Oct. 10, 1879	Present	
	Gaines, N. W.	Fayette	Sept. 6, 1880	Hon. disch'd	Dec. 21, 1882.
	Three vecancies				
IX.	Hays, S. A.	Gilmer	Dec. 4, 1880	Present	
	Johnston, J. L.*	Monongalia	April 11, 1879	Present	
	Brown, B.*	Kanawha	Sept. 12, 1879	Present	
	Two vacancies				
X.	O'Brien, D. U.	Lewis	Sept. 19, 1879	Present	
	Yokum, H.	Randolph	Sept. 2, 1880	Present	
	Armstrong, R. A.	Upshur	March 8, 1882	Furloughed	Mar. 14, 1883.
	Irim, W. O.	Upshur	March 19, 1883	Present	
	Rohrbough, I. M.	Upshur	Sept. 1, 1880	Hon. disch'd	Mar. 6, 1883.
	Vacancy				

ROSTER OF STATE CADETS—CONTINUED.

No. of District.	Name.	County.	Enlisted.	Status.	Furloughed or Discharged.
XI.	Lazzell, I. G.*	Monongalia	Jan. 9, 1880	Present	
	Tapp, R. W.	Monongalia	March 31, 1880	Present	
	Michael, W. H.	Preston	Nov. 4, 1881	Present	
	Elliott, E. S.	Preston	Sept. 6, 1882	Present	
	Cunningham, G. W	Monongalia	Sept. 6, 1882	Present	
XII.	Harmison, C. C.	Hampshire	Sept. 19, 1881	Hon. disch'd	Mar. 8, 1883.
	Workman, R.	Mineral	Sept. 6, 1882	Present	
	McClung, M. G.	Pendleton	Oct. 18, 1882	Present	
	Rhodes, W. E.	Lewis	March 14, 1883	Present	
	Two vacancies				
XII.	Thomas, F. M.	Preston	March 3, 1882	Furloughed	Sept. 1, 1883.
	Talbott, H. T.	Jefferson	Oct. 12, 1882	Deserted	Mar. 13, 1883.
	Shugert, Geo. N.	Jefferson	Nov. 1, 1882	Present	
	Three vacancies				

References—*Class of '83—vacancy after June 15, 1883.

†Failed to return books belonging to Cadet Library. This roster shows only cadets actually present within the year, omitting such as failed to return and were discharged after September 6, 1882.

ROSTER OF VOLUNTEER CADETS.

NAMES.	RESIDENCE.	ENLISTED.	STATUS.	DISCHARGED
Wells, S. P*	Wood Co., W. Va	Sept. 19, 1879	Present	
Casteel, D. T. E	Oakland, Md	Sept. 1, 1880	Resigned	Nov. 28, 1882
Reed, D. K	Grafton, W. Va	Oct. 12, 1880	Hon. Discharged	Jan. 13, 1882
Williams, A. B	Greensborough, Pa	Sept. 7, 1881	Hon. Discharged	Oct. 7, 1882
Alkire, W. S	Weston, W. Va	Sept. 7, 1881	Present	
Strausz, P. H	Irondale, W. Va	Sept. 7, 1881	Present	
Robinson, H. L	Uniontown, Pa	Sept. 7, 1881	Present	
Fleming, M. H	Cassville, W. Va	Oct. 26, 1881	Hon. Discharged	Nov. 1, 1882
Core, L	Cassville, W. Va	Oct. 26, 1881	Hon. Discharged	Oct. 7, 1882
Hurley, E. D	Barton, Md	Feb. 18, 1882	Hon. Discharged	Jan. 13, 1883
Purnell, F. M	Benwood, W. Va	Oct. 15, 1878	Resigned	Jan. 20, 1883
Cooper, C. N	Belleville, W. Va	Sept. 19, 1879	Present	
Forbes, W. H	Wheeling, W. Va	April 8, 1882	Hon. Discharged	Feb. 12, 1883
Devine, J. M	Wheeling, W. Va	Sept. 12, 1881	Discharged	Jan. 13, 1883
McComas, H	Oakland, Md	Sept. 9, 1882	Hon. Discharged	Nov. 28, 1882
Brown, C. C	Andy, W. Va	Sept. 6. 1882	Hon. Discharged	Nov. 28, 1882

References*. Class of '83. Graduates June 15, 1883.

DISTINGUISHED CADETS, 1881-82.*

Names.	Military.	Course.
Cox, A. L.	Military	
Jeffries, E. D	Military	
Lawhead, J. H	Military	
Lewis, G. C	Military	
Stewart, J. H	Military	
Bland, W. T	Military	Academic.
Baker, G. C	Military	
Brown, S. B	Military	
Brown, B.	Military	
Johnson, J. L	Military	
Lazzell, I. G.	Military	
Musgrave, J. E.	Military	
Wells, S. P.	Military	
Anderson, E. H.	Military	
O'Brien, D. U.	Military	
Purnell, F. M.	Military	
Robinson, H. L		Academic.
Casteel, D. T. E	Military	
Fleming, H.	Military	
Gaines, N. W	Military	
Gaines, J. H	Military	
Michael, W. H.	Military	
Sweeney, J. D	Military	
Tapp, R. W	Military	
Yokum, H.	Military	
Devine, J. M.	Military	
Harris, F. M.	Military	
Snodgress, E. M.	Military	
Cooper, C. N	Military	
Ashby, S. T	Military	
Bainbridge, A. M.	Military	
Forbes, W. H	Military	
Fleming, M. H		Academic.
Hollingsworth, H. S.	Military	Academic.
Kerr, R. E	Military	
Lawson, E. W.		Academic.
Liller, W. A.	Military	Academic.
Thomas, F. M.	Military	
Williams, A. B	Military	
Hughes, M. S.	Military	
Bennett, C. S.	Military	Academic.

*Cadets who attain a grade of nine on a scale of ten for the year are designated as "distinguished."

General Remarks.

LOCATION.

The West Virginia University is located at Morgantown. Its buildings are ample, eligibly situated, and admirably adapted for the purposes. They are immediately outside of the borough, on the right bank of the Monongahela river, and command a wide prospect of exceedingly attractive and picturesque scenery. Morgantown can be reached daily by coaches from Fairmont on the Baltimore and Ohio railroad, and from Uniontown, Pennsylvania. Steamboats from Pittsburgh arrive every day at Geneva, twelve miles below Morgantown, and, under appropriations from Congress, the slack-water navigation of the river will soon extend to Morgantown.

ORIGIN.

The University is the outgrowth of the "West Virginia Agricultural College," established in 1867, with the proceeds of the State's share of the land, granted by Congress in aid of agricultural and industrial education in the States. This fund, increased by subsequent appropriations by the State, now amounts to about $110,000, and constitutes the permanent endowment of the institution. There are annual appropriations for current and contingent expenses. The citizens of Morgantown, with generous appreciation of educational advantages, contributed in grounds, buildings and money, about $50,000.

SCOPE AND WORK.

The scope of the University and the work which it is accomplishing will be best understood from the statements of the several Schools, already set forth.

The Law School is now fully organized, and those who complete its courses hereafter will receive the regular degree.

There is as yet no full Medical Department, but as the beginning of such a department the Regents have established a Chair of Anatomy, Physiology and Hygiene, and it is believed that in the studies of this School, with its ample practice in the dissecting room, and of the Schools of Chemistry and Botany, unsurpassed opportunities are offered for the preliminary instruction of medical students.

THE PREPARATORY.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. This department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity of this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of Collegiate Study proper, or shutting out from the advantages of the Institution many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or, if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

During the spring term of each year, (beginning on the second Wednesday in March,) unusual facilities are provided for all who may desire to take a short and limited course, or to fit themselves for teaching, or other specialties. All needed assistance in the work being rendered by the several professors of the University, superior advantages are afforded to all comers.

REQUISITES FOR ADMISSION.

I. All candidates for admission to any School of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must produce certificates of honorable dismission from the same.

III. No student will be graduated in any School of the University, who is deficient in English elementary studies.

IV. Candidates should procure a copy of the printed laws of the University, also the Treasurer's receipt for tuition before presenting themselves for enrollment.

V. Applicants for admission to the Preparatory Department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic through common fractions.

VI. Students are required to pronounce Greek and Latin according to the so-called Continental Method.

EXAMINATIONS.

Examinations are held at such times as each professor may deem necessary, in his School, and at the close of each session.

No student shall be excused for non-attendance, except upon presentation of a reason which may be considered valid by the Faculty.

In ascertaining a student's standing, the examination marks shall count one-half and the recitation marks one-half, and the time allowed for each examination shall be not less than two hours and may be as much more as the Professor in charge shall deem sufficient.

Students who have not before been at the University should, on their arrival, report themselves to the President, and by him be assigned to such Schools, as they may desire and be prepared to enter.

TUITION.

TUITION IN THE PREPARATORY DEPARTMENT, -	$5 00	per term.
" OTHER DEPARTMENTS, - - - -	8 00	"
CONTINGENT FEE IN PREPARATORY DEP'T, - -	2 00	"
" " OTHER DEPARTMENTS, - -	2 00	"
" " LAW SCHOOL, - - - -	15 00	per session

Ministerial Students are admitted free.

BOARDING AND EXPENSES.

THE UNIVERSITY HAS NO DORMITORIES. This is a matter both of necessity and policy; of necessity, because the State has not been able to furnish money to build dormitories; of policy, because it is thought better for the students to be distributed among the people of the University town, amenable to the common laws and sentiments of society.

Three methods of boarding are practiced: (1) Self-boarding, by individuals, or, more commonly, by small groups or colonies composed of members of the same family, or of neighboring families. Rooms are hired, and furniture, provisions and fuel are brought from home. When well managed, this is an excellent and very economical mode of living. From $1.00 to $1.50 a week per pupil may be set down as the cost. (2) Club boarding. This has been practiced for some time and is an excellent system. A company of young men rent a number of rooms or an entire house and then organize and operate a boarding club. The price of boarding in clubs varies from $1.75 to $2.25 per week, including rent of room. (3) Boarding in families. The difficulties formerly encountered in procuring suitable places for students desiring to board in families, have disappeared. Good boarding can be found at reasonable prices ranging from $2.50 to $3.50.

Incidental expenses depend on the habits of the student. The law prohibits students incurring debts at stores, groceries, etc., except on written order of parents, guardian or teacher. Unnecessary and lavish expenditures induce not only waste of time and means, but neglect of study and formation of bad habits.

The necessary expenses for the college year of forty-one weeks are not more than $175.00 per year, including board, room rent, tuition, etc., and every advantage afforded by the University.

PRIZES.

THE REGENTS' PRIZES—To the student who shall write the best essay upon a given subject, $25.00. To the student who shall be adjudged the best declaimer, $15.00. These prizes to be awarded after public competition, by a committee of citizens appointed by the Faculty.

These were awarded at the last contest as follows:

Essay—L. M. Boyers. - - - -	$25 00
Declamation—W. S. O'Brien. - - -	15 00

THE PRESIDENT'S PRIZES—In the annual contest of the Columbian and Parthenon Literary Societies, the President of the University offers the following prizes: To the successful Debater, $40.00; to the successful Orator, $25.00; to the successful Essayist, $25.00; to the successful Declaimer, $1.000.

The prizes to be awarded by a committee selected by the Faculty.

DISCIPLINE.

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept in which are entered the grade of scholarship of each student, and his absence from exercises. A report is sent at the close of each month to parents or guardians, so that they may see how their sons and wards are studying, and how they stand in scholarship and deportment. In case of negligence, irregularity, or other misconduct, the students will be privately admonished and the parents or guardian will be informed of the fact. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is especially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his classmates that he be punctual in his place from the first day of the term till the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with those duties.

RELIGIOUS INSTRUCTION AND WORSHIP.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all the students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

LIBRARY.

A respectable beginning towards a University Library has been made. About five thousand volumes have been carefully selected and placed on its shelves, including, not only many choice and valuable books of reference, but also standard works in the various departments of History, Biography, Theology, Agriculture, Arts, Science and General Literature.

We respectfully request the friends of education to make contributions to its shelves.

READING ROOM.

Nearly all the weekly journals of the State, the Daily Wheeling *Register*, the Wheeling *Intelligencer*, and valuable religious papers of all leading religious denominations are gratuitously sent to the reading room of the University.

MUSEUM.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens in other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labeled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The vicinity of the University offers unrivaled advantages for the study of practical Geology. Especial attention is paid to this branch.

Additional provision has recently been made for the study of Practical Geology by means of an annual excursion of four weeks with Prof. White through portions of West Virginia and of surrounding States.

The laboratory of Practical Chemistry is in operation. The instruction for the present is devoted chiefly to analysis, with its application to agriculture.

DONATIONS TO THE MUSEUM DURING THE YEAR.

C. S. Bennett—Spear Head of Flint from Harrison county.

S. L. Boyers, Jr.—Humming Bird's Nest from Monongalia county.

S. L. Boyers, Sr.—Pike's Head from Monongahela river.

Geo. C. Baker—Five Vertebrate Skeletons.

L. M. Boyers—Five Vertebrate Skeletons.

W. T. Bland—Five Vertebrate Skeletons.

Ben. Brown—Five Vertebrate Skeletons.

J. F. Corke—Five Vertebrate Skeletons.

J. L. Johnston—Five Vertebrate Skeletons.

J. F. Lazell—Five Vertebrate Skeletons.

S. P. Wells, Jr.—Five Vertebrate Skeletons.

Stephen Headley—Limestone from near Blacksville.

C. L. Eakin—Specimens of Rocks and Insects.

J. W. Hartigan—Anatomical preparations.

Will Anderson—Insect Larva.

Rev. D. G. Helmick—Fossil Coral.

H. M. McComas—Collection of Recent Shells.

Allen Gittings, Ohio—Indian War Club, Battle-axe, and Arrow Heads.

UNITED STATES SIGNAL STATION.

By direction of General Meyer, Chief Signal Officer of the Army, a signal station has been established at the University for the benefit of Commerce, Agriculture and Science. It was for this session, in charge of Sergeant Sprigg, S. S., U. S. Army.

LITERARY SOCIETIES.

There are two of these, (the Parthenon and Columbian,) in connection with the University, supplied with suitable halls, tastily furnished, whose exercises in Composition, Reading, Orations, Debate and Criticism are, in many respects, of great advantage to the student. They also afford facilities for the study of. and acquaintance with, Parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries.

Appendix.

The Geological Excursion for which the Board of Regents made provision, at their annual meeting in 1881, was taken by five members of the class of '82, viz: D. H. Courtney, Theo. E. Hodges, E. D. J[illegible], J. H. L[illegible] and [illegible]. H. Stewart.

The young gentlemen accompanied by the writer left Morgantown April 2[illegible], 1882, for a horseback ride through to the Great Kanawha river. The route chosen passed through Preston, Tucker, [illegible], Randolph, [illegible], Nicholas, Clay, Roane and Kanawha counties, [illegible] the [illegible] at the mouth of Peetsallico. The return journey was through Putnam, Mason, Jackson, Wirt, Ritchie, Gilmer, Lewis, [illegible] and [illegible] counties, reaching Morgantown May 2[illegible]. From Gowindburg in Preston, a short trip by rail was taken across the Allegheny mountains, to examine the magnificent section of the rocks exposed along the gorge of the North Potomac river between Piedmont and Keyser, where the strata dip so rapidly to the northwest that the beds from the top of the Coal measures to the base of the Upper Silurian, a vertical thickness of more than three miles, rise into the air between the two points.

Through the courtesy of Gen. Smith, of the Chesapeake & Ohio Railroad, who kindly granted us free transportation, an excursion was made along that line from Charleston to Richmond and return, stopping at several points of geologic interest. The notes of most general interest taken during the entire tour, have already been published in "The Virginias," a monthly journal devoted to geology, mining and the general industrial interests of the two Virginias, published at Staunton by Maj. Jed. Hotchkiss. The notes which follow were published in the July, August and September Nos. of "The Virginias."

The excursionists were treated with uniform kindness by the citizens throughout their entire journey, but they are under especial obligations for favors to Gen. Smith, Manager Chesapeake & Ohio Railroad; Maj. Jed. Hotchkiss, Dr. Jas. Stewart, Mr. G. W. Craig, Profs. Page and Mallet, of the University of Virginia, and students Berkeley and Seamon of the same.

I. C. WHITE,
Prof. Geology and Natural History.

West Virginia University, April 10, 1883.

NOTES ON THE GEOLOGY OF WEST VIRGINIA.

BY PROF. I. C. WHITE.

No. 1:—A Section on B. & O. R. R. in Preston County.

The following (Art. I.) is on a section made along the Baltimore and Ohio railroad in Preston county between Rowelsburg and Cassady Summit, or cut No. 80.

From Rowelsburg Cheat river turns northwestward, and trenching through Briery mountain, in a great gorge, makes the wild and picturesque scenery observed from the B. & O. cars as the track winds rapidly up to Cut 80. The course of the railway is nearly at right angles with the strike, and as its bed is almost one continuous rock-cut between the Summit and Rowlesburg (a distance of five miles), the whole geological column between the *Mahoning sandstone* and the top of the *Chemung* is very completely exposed.

The dip is 8°—10° to the northwest, since the section lies on the northwest slope of the great "Viaduct axis" of Pennsylvania, which entering Maryland from that State, crosses the National road in Garrett county, 33 miles west from Cumberland, and continuing southwestward crosses the B. & O. just east from Cranberry Summit, where, at an elevation of 2,500′ above tide, it brings to the surface the basal members of the Chemung, thus making a hoist of more than 5,000′ in the rocks between its crest and the bottom of the syncline, seven miles northwest.

The syncline here referred to is the one which lies between the Viaduct and Laurel Hill axis of Pennsylvania. It strikes Cheat river from the northeast at Albright, and keeping southwestward crosses the B. & O. one mile east from Tunnelton, six miles west from Rowlesburg, or only one mile west from the western end of our section. The Laurel Hill axis (Kingwood, or Preston Co. axis of Wm. B. Rogers) crosses the B. & O. just west from Tunnelton, and nearly through the centre of the great Kingwood tunnel, where it elevates the Upper Freeport coal to 1,870′ A. T.

These preliminary remarks will serve to locate the position of the section, but in a future No. I shall give the comple structure along the B. & O. R. R. between Fairmont and Keyser, and illustrate the same with a drawing.

In descending from Cut 80 to one mile west from Rowlesburg, the following section is seen in the cuts of the Baltimore and Ohio railroad:

	Ft.	In.
1. Mahoning Sandstone, massive; visible.....	30	0
2. *Coal* (probably an offshoot of the Upper Freeport).....	0	6
3. Shales.....	3-15	0

4.	*Upper Freeport Coal* { Coal.....0′ 4″; Slate.....0′ 3″; Coal, good 1′ 3″; Shale .....1′ 0″; Coal. slaty 1′ 3″; Coal, good 1′ 5″; Slate ..... 0′ 2″; Coal..... 0′ 10″ }	5 6		No. XIII, or Penn.
5.	Shales, sandy	8 0		
6.	Sandstone	10 0		
7.	*Upper Freeport Limestone* { Limestone 1′ 6″; Shales..... 5′ 0″; Limestone 8′ 0″ }	14 6		
8.	Shales	25 0		
9.	Sandstone	3 0		
10.	Impure fireclay	10 0		
11.	Concealed	20 0		
12.	Sandstone, gray, full of *plant fragments*	25 0	310′	Lower Coal Measures.
13.	*Coal, Upper Kittanning*, visible	0 6		
14.	Concealed	40 0		
15.	Shales	10 0		
16.	Sandstone, gray, massive	10 0		
17.	*Coal, Middle Kittanning*, (Darlington) visible	2 0		
18.	Concealed	75 0		
19.	Fireclay, containing nodules of iron ore	10 0		
20.	Shales, sandy	15 0		
21.	*Coal, Clarion ?*	1 0		
22.	Shales, brown, sandy	16 0		
23.	*Coal, Brookville*, { Coal, slaty...2′ 0″; Shale .....5′ 0″; Coal .....1′ 0″ }	8 0		
24.	Black slate	1 6		
25.	Homewood Sands'e, massive, coarse, yellowish	60 0		No. XII, or the Conglomerate Measures.
26.	*Coal*	0 5		
27.	Shales, sandy	6 0		
28.	*Coal*	0 5		
29.	Shales, brown, sandy	45 0		
30.	*Coal, and coaly shale*	2 0		
31.	Shales	3 0		
32.	Sandstone, massive	25 0		
33.	Sandstone, flaggy	15 0		
34.	Sandstone, massive, grayish-white	20 0		
35.	Sandstone, flaggy	8 0		
36.	Shales, brown, with *coal* streak near centre	4 0		
37.	Sandstone, grayish-white.	20 0		
38.	Shale, brown	3 6	368′	
39.	*Coal*	0 5		
40.	Shale, gray	4 0		
41.	*Coal*	0 4		
42.	Shales, drab, sandy	8 0		
43.	Iron ore, carbonate	0 6		
44.	Shales	5 0		
45.	*Coal*	1 0		
46.	Shales	10 0		
47.	*Coal*	0 4		
48.	Shales, brown, sandy.	25 0		
49.	*Coal*	0 6		
50.	Shales, brown	20 0		
51.	Sandstone	15 0		
52.	Shales, buff, sandy	20 0		
53.	Conglomerate, very massive, large pebbles	20 0		

	Ft.	In.	
54. Concealed	75	0	No. XI, Mauch Chunk Shale. 370′ Greenbrier or
55. Shales, green and red	35	0	
56. Shales, green, sandy	20	0	
57. Sandstone, green, somewhat massive	60	0	
58. Shales, green and red	28	0	
59 Shale, green	6	0	
60. Shale, red	6	0	
61. Sandstone, green	50	0	
62. Shale, variegated with red and green	80	0	
63. Shale, brown	10	0	

FORMATION No. XI.

64. *Limestone*, impure	20	0	No. XI, Mountain or Greenbrier Limestone. 342′
65. Shale, red	15	0	
66. Sandstone, green	15	0	
67. *Limestone*, pure, (opposite 257 mile post B. & O. R. R.)	4	0	
68. Shale, variegated (green and red)	4	0	
69. Shale, red	3	6	
70. *Limestone*, and green shale	4	0	
71. Shale, red	4	0	
72. *Limestone*, massive	60	0	
73. Variegated (red and green) shale	6	0	
74. *Limestone*, very fossiliferous	5	0	
75. Shale, reddish	10	0	
76. Concealed	15	0	
77. *Limestone*	10	0	
78. Shales, red and green, with two thin layers of limestone near the centre	15	0	
79. *Limestone*, somewhat silicious	20	0	
80. Shale, blood-red	10	0	
81. *Limestone*, impure	1	6	
82. Shale, red	5	0	
83. "*Silicious Limestone*," very massive, except about 10′ at base	105	0	
84. Shale, variegated (red and green), base of No. XI	10	0	

FORMATION No. X.

85. Sandstone, shaly, greenish	20	0	No. X, or Vespertine (Pocono) of Penn. 566′
86. Sandstone, mostly massive, grayish	100	0	
87. Shales, drab	20	0	
88. Sandstone, greenish, gray	10	0	
89. Shales, buff, sandy	85	0	
90. Sandstone, gray and buff	75	0	
91. Shales	20	0	
92. Sandstone, shaly, greenish	45	0	
93. Sandstone, yellow	12	0	
94. Shales, interstratified with shaly sandstone	28	0	
95. *Limestone*, very impure, sandy, ferruginous	1	0	
96. Shale, greenish, sandy	6	0	
97. Sandstone, greenish-gray	18	0	
98. Shales, brown, sandy	45	0	
99. Greenish gray sandstones and shales	40	0	
100. Iron ore (carbonate), very silicious	2	0	
101. Shale, bluish	15	0	
102. Sandstone,	4	0	
103. Shales, gray, sandy, base of No. X	20	0	

Formation No. IX.

		Ft.	In.	
104.	Red Shale	10	0	No. IX. or, Catskill Beds. 695′
105.	Sandstone, greenish-gray	25	0	
106.	Red shale	15	0	
107.	Sandstone, greenish-gray	45	0	
108.	Red shale	12	0	
109.	Shale, green, sandy	120	0	
110.	Red shale	8	0	
111.	Sandstone, green, shaly	35	0	
112.	Red shale	55	0	
113.	Sandstone	5	0	
114.	Red shale	25	0	
115.	Sandstone, green	15	0	
116.	Red shales, streaked with thin sandstones	60	0	
117.	Sandstone and shale, greenish	10	0	
118.	Red shale, streaked with light green	5	0	
119.	Red shales, interstratified with thin green sandstones	70	0	
120.	Sandstone, greenish	25	0	
121.	Red shale	50	0	
122.	Sandstone	15	0	
123.	Red shale, streaked with green	40	0	
124.	Sandstone, greenish-gray	25	0	
125.	Red shales, (base of IX), interstratified with thin green shales and sandstones	25	0	

Formation No. VIII.

126.	Sandstone, yellowish-gray	30	0	Upper portion of the Chemung of No. VIII. 202′
127.	Shale, greenish-gray	8	0	
128.	Sandstone, yellowish	15	0	
129.	Blood-red shales, fossiliferous	3	6	
130.	Shale, greenish-black	4	0	
131.	Sandstone, massive, greenish	25	0	
132.	Shale	3	6	
133.	Sandstone, yellowish, pebbly	9	0	
134.	Shale, blue	10	0	
135.	Sandstone	5	0	
136.	Shale, dark	12	0	
137.	Sandstone	2	6	
138.	Shale	13	0	
139.	Sandstone, yellow, massive, pebbly	12	0	
140.	Shales and shally sandstone	30	0	
141.	*Flat-Pebbled Conglomerate* (Venango 3d Oil-sand?)	1	0	
142.	Shales, very soft, drab to base of section on B. & O. R. R., ½ mile west from Rowlesburg	20	0	

Summary of Beds of Section:

Lower Coal Measures (*No. XIII*)			310′
Conglomerate Measures, or *No. XII.*	Homewood s s.	60′	368′
	New River Coal series	223′	
	Lowest beds of XII	85′	
Mauch Chunk series, (*No. XI*)	Shale	370′	712′
	Limestone	332′	
Greenbrier series.	Shale	10′	

Vespertine, (*No. X*), (*Pocono*)	566′
Catskill (*No. IX*)	695′
Chemung (top of *VIII*), measured	202′
Total thickness of beds....	2,853′

The Mauch Chunk series may also be summarized thus :

Shale	370′
Shale, interstratified with limestone	70′
Limestone	60′
Shale and limestone	97′
Silicious limestone	105′
Shale	10′

Many interesting observations on the above section suggest themselves, but space will suffice for only a few at the present time.

The increase of Nos. XIII, XII and XI southwestward from the Pennsylvania line in Monongalia County is quite marked ; for there where I have measured these beds in the canyon of Cheat river, on the northwest slope of the *Chestnut Ridge axis*, No. XIII is 250′ thick, or 60′ less than at Rowlesburg ; No. XII is only 200′, or 168′ less than at the latter place ; while No. XI is 475′ or 237′ less than at Rowlesburg.

The appearance of the *New River Coal Group*, No. XII, so well defined this far to the northeast, would seem to point to the conclusion that much valuable coal may yet be discovered in it between the B. & O. R. R. and the Great Kanawha river.

The 105′ of "Silicious Limestone" in the section, though here referred provisionally to No. XI, belongs really, in the opinion of the writer, to *No. X* or *the Vespertine* ; for it is evidently the southwestern representative of the "*Silicious Limestone*" of Prof. Stevenson in Fayette and Westmoreland counties, Pennsylvania, which he there finds 20′–40′ thick and passing directly into the underlying *Vespertine* (*No. X*) *sandstone*. On Cheat river, in Monongalia County, I find the same "Silicious Limestone" at the base of *XI*, 10′–30′ thick and passing insensibly down into a great bed of massive Vespertine sandstone 100′ thick, quite pebbly, which everywhere caps the summit of No. X in Monongalia county. Here at Rowlesburg the lime seems to have invaded the entire mass of this great sand stone horizon, for the 105′ of "Silicious Limestone," or No. 83 of the section, seems unquestionably identical with the 100′ sandstone at the top of X in Monongalia.

At Rowlesburg it contains (judging by physical aspect) 30–50 per cent of lime, is very massive, and makes a line of great white cliffs around the hills and summits of the mountain, so that, seen from a distance, the geologist would unhesitatingly place it in the Vespertine. The entire absence of the fossils so abundant in the higher beds (as in No. 72) would also seem to have separated it by a strong line from the genuine limestones of No. XI.

No. II.—The Geological Structure Along B. & O. R. R. Between Newburg and Tunnelton, Preston County.

Illustrated by Map and Sections.

Newburg is situated about two miles east from the centre of the great trough between the Chestnut Ridge and Laurel Hill axis. This broad and deep syncline crosses the Conemaugh river in Westmoreland County, Pennsylvania, at New Florence, and continuing southwestward is cut through by the Youghiogheny, near Stewartson station; keeping onward from this point toward the West Virginia line, it gathers the waters of Sandy creek into its wide basin, down the centre of which this stream flows to Cheat river, in Preston County, West Virginia, four miles above the Monongalia border; thence southwestward it makes the "Glades" country of Preston, its central line passing just southeast of Masontown, one mile north of Reedsville, through Gladesville and Irondale, reaching the B. & O. R. R. near Independence.

The eastern rim (Laurel Hill axis) of this trough crosses the B. & O. R. R. at Tunnelton, and the western rim (Chestnut Ridge axis) is cut by the same railroad at Valley Falls, near the Taylor-Marion line, thus making the course of the B. & O. R. R. within the trough 27 miles. The air-line distance, from rim to rim, at right angles to the strike, is, however, not more than 12 miles at Newburg and about five miles less at the Pennsylvania line.

The section of the rocks in this basin at Newburg is of especial interest, since it is the only locality where the great *Pittsburgh coal* is caught (with a single exception), between the Conemaugh river in Pennsylvania and the B. & O. R. R. in West Virginia, the highest rocks everywhere else in the trough being those composing the lower half of the Barrens (No. XIV.)

The Pittsburgh coal is caught in the highest knobs on either side of Otter creek at Newburg and about 600' above the level of the same, there being altogether about 500 acres of the coal within its outcrop.

The Newburgh Coal Company, of which Mr. Henry is superintendent, has for many years been mining this bed in the summit of Scotch hill, just south from Otter creek, reaching the B. & O. R. R. over a long incline a short distance west from the station.

As the supply of Pittsburgh coal is nearly exhausted in Scotch hill the Company sunk a diamond drill hole, in August, 1881, to explore the Lower Coal measures (No. XIII) for beds to which they might shaft. The boring begins near the foot of the incline and about 5' above the bed of Otter creek. I was kindly permitted to take a copy of the bore-hole record, and this I connected with a nearly vertical measurement up to the *Pittsburgh bed* in Scotch hill, thus getting the following section:

Upper Coal Measures, No. XV.

1. Pittsburg sandstone, coarse, micaceous				35′
2 *Pittsburg coal*	Coal, slaty	0′ 8″	Roof coal 4′ 3″	15′
	Shale	0′ 9″		
	Coal	0′ 10″		
	Shale	2′ 0″		
	Main bench, good coal		9′ 0″	
	Slate parting		0′ 3″	
	Bottom coal, slaty		1′ 6″	

	Ft.		
3. Fireclay	?		Barrens, or No. XIV.
4. Concealed	10		
5. Sandy shales	30		
6. Concealed	230		
7. Sandstone, very massive, pebbly	30		
8. Concealed	15		
9. Sandstone, flaggy	10		
10. Shales, sandy	10		
11. Shales, dark, very fossiliferous, horizon of "*Crinoidal limestone*" at top	15		
12. Concealed	20		
13. *Red shale*, marly, visible	5		
14. Concealed	40		
15. Sandstone, yellow, very hard, visible	10		
16. Concealed	15	636′	
17. Fireclay and sandy shales	5		
18. Sandstone, massive	20′	Mahoning Sandstones. 191′	
19. Sandy shale	10		
20. Sandstone, massive to level of mouth of bore-hole (at 1200′ A. T.)	10		
21. Conductor hole	10		
22. Sandstone	35		
23. "Soapstone" (shale)	25		
24. *Coal*	1		
25. Sandstone	40		
26. "Soapstone" shale	2		
27. Sandstone	34		
28. "Soapstone" (shale)	1		
29. Sandstone	3		
30. *Upper Freeport Coal* (coal 3′ 0″; coal & slate 2′ 4″)		5′ 4″	Lower Coal Measures, No. XIII.
31. Shale	8′ 0″	155′	
32. Sandstone	18 0		
33. *Limestone, Freeport*	8 0		
34. Shale	6 0		
35. *Iron ore*	1 0		
36. Shale	4 0		
37. Fireclay	2 0		
38. Shale, gray	14 0		
39. Shale, dark	11 0		
40. Shale, gray	9 0		
42. Sandstone, fine-grained 34′; 43. Sandstone, coarser 40′ — Freeport ss.	74 0		
44. *Coal*, Kittanning Middle	2 0		225′
45. Shale	15 0		
46. *Coal* (coal 7′ 6″; slate 0′ 10″; coal 1′ 2″) — Kittanning Lower?	9 6		
47. Sandstone and shale	38 0		

48. *Sandstone* (*Homewood*, top of *XII*)		88 0	Conglomerate series No. XII upper half
49. Slate		6 0	
50. *Coal*		0 10	
51. Shale		6 0	
52. *Coal*	coal 0′ 3″ slate 1′ 0″ coal 0′ 4″	0 7	
53. Slate		10 0	
54. Sandstone, very hard and pebbly to bottom of hole at 500′		12 0	

If the true thickness of No. 46 be given by the record, it shows a surprising local development of one of the *Kittanning coal beds*, and this is all the more remarkable because at Kingwood, only 12 miles distant, the bed at this horizon is but 2′, and everywhere else in Monongalia and Preston counties where this horizon is exposed no coal bed thicker than 2½′ has yet been found. The Newburg Coal Company has begun sinking a very large shaft to this coal at a locality where the depth to the same is something over 350′. It would seem from all the facts in the case that such a large expenditure in shafting will prove unwise without first making further explorations with the drill to test the extent of this greatly thickened coal bed. It comes at the same horizon below the *Upper Freeport* as the "6′ bed" mined at Bloomington and Westernport in the Potomac coalfield, and represents one (either the *Middle* or *Lower*) of the *Kittanning beds* of Pennsylvania.

It will be observed from the section that the *Barrens*, or interval of rocks between the Pittsburg and Upper Freeport coals, are much thicker here than in Southwestern Pennsylvania, where they never exceed 600′. At Morgantown, Monongalia county, this interval is 585′ or 50′ less than at Newburg. The expansion seems to have taken place mostly in the Mahoning-sandstone, since that series, which never exceeds 150′ in Monongalia, is here 190′ and, as usual, contains a small coal bed, (the Brush Creek bed), near its centre.

The Crinoidal Limestone is absent from the *Barrens* in this region, but its accompanying *dark fossiliferous shales* attest its place in the series at No. II of the section. In them were seen: *Athyris subtilita*, *Spirifer plano-convexus*, *Productus Nebrascensis*, *P. Prattenianus*, *P. semi-reticulatus*, *Chonetes Semithianus*, *Hemipronites crassus*, *Bellerophon carbonarius*, *B. Montfortianus*, *B. per-carinatus*, *Pleurotomarice Grayvilleiensis*, *Macrocheilus ventricosus*, and numerous other forms which I did not take time to note.

The Red Shale Horizon, everwhere so characteristic in the Pennsylvania Barrens, immediately below the Crinoidal Limestone Shales, also retains its place in the series at Newburg as No. 13.

The Morgantown Sanstone is very probably represented by No. 7, a very pebbly, massive rock which juts out in bold cliffs high up in the hills for many miles around Newburg, and thus affords a fine key rock from which to reckon downwards to the Upper Freeport coal

lying, as our section shows, nearly 340′ below it. This is doubtfully identified with the Morgantown Sandstone, since the base of this stratum comes only 200′ below the Pittsburg Coal at Morgantown, while No. 7 at Newburg comes 300′ below that coal. The expansion of the Barrens found here may, however, account for most of this difference.

The Pittsburg Coal cokes very well at this locality, and possesses the same roof and bottom structure which everywhere characterize it in Pennsylvania.

From Newburg the B. & O. railroad passes nearly due eastward up Otter creek with a grade of not less than 100′ to the mile, but the rapid eastward rise of the rocks toward the Laurel Hill axis brings the Upper Freeport Coal above drainage very soon, and elevates it to the level of the B. & O. railroad track at the western end of Murray tunnel, near Austin, three miles east from Newburg.

One mile below Austin where this bed is first opened above drainage, it exhibits the following structure at a section on the north bank of Otter creek :

1. Mahoning Sandstone, massive, visible		10′
2. Coal, Upper Freeport,	coal 1′ 0″ slate 0′ 1″ coal 2′ 3″ slate and bone 0′ 3″ coal 1′ 6″	5′
3. Concealed		50′
4. Silicious iron ore, reported		3′

The following section was made by Mr. Lawhead at the western end of Murray tunnel, near Austin :

1. Sandstone, massive at base, flaggy above	30′	Mahoning Sandstone 140′
2. Concealed	25′	
3. Shales	30′	
4. Sandstone, very massive, tunnel cut through it	65′	
5. Upper Freeport coal, visible (1,575 A. T.)	5′	
6. Concealed	55′	
7. Iron ore, silicious, reported	3′	
8. Concealed	30′	
9. Freeport Sandstone, very massive, seen in cliffs along Otter creek	75′	

The Upper Freeport is coked quite extensively at this locality by the Austin Coke Co., being shipped to Chicago where it finds a ready maket and competes successfully with the Connellsville coke, as stated by Prof. Stevenson, whose report on it was republished in The Virginias for May, 1881.

Since this coal is successfully coked at the Irondale Furnace on Three Forks, in this same basin, there would seem to be good reason for believing that this great basin, 8–12 miles wide, stretching across Preston county from the Pennsylvania line to the B. & O. R. R. and all underlaid by this bed, will yet furnish much valuable coking coal.

Eastward from Austin the rocks still continue to rise quite rapidly, the Upper Freeport Coal keeping always above the Rail road grade until we come to the western end of Kingwood tunnel, where the following section was taken:

1. Mahoning Sandstone, massive, visible			25′ 0″
2. Upper Freeport coal; Base 1,820′ A. T.	coal, slaty	1′ 3′	8′ 9″
	coal	3′ 6″	
	shale with streaks of coal	2′ 0″	
	coal	2′ 0″	
3. Shales, brown, with nodules of iron ore			18′ 0″
4. Freeport Limestone;	limestone	2′	8′
	shale	2′	
	limestone	2′	
	shale	1′	
	limestone	1′	
5. Shales, bluish, to track level (1,778′ A. T)			16′

The Freeport Limestone contains a minute, univalve fossil, evidently identical with the one so commonly occurring in it in Pennsylvania. This limestone serves to identify absolutely the Austin coking coal with the Upper Freeport bed of the Pennsylvania series, as had long ago been done by Prof. Lesley, on general straitigraphical grounds.

At the eastern end of the Kingwood tunnel the base of the Upper Freeport coal has an elevation of 1,865′ A. T., and is there dipping eastward, showing that the Laurel Hill axis crosses the B. & O. R. R. somewhere in the Kingwood tunnel, probably nearer its eastern end than its western, and about seven miles east from Newburg by the B. & O. R. R.

No. III. The Pittsburg Coal and the Upper Coal Measures along the Great Kanawha river in Putnam and Mason counties.

The late Prof. Wm. B. Rogers, traced the celebrated *Pittsburg coal* across West Virginia, from the Pennsylvania line to the Great Kanawha river in Putnam county, but was unable to find it west from that stream.

During my May visit to the Kanawha region I succeeded in identifying this coal bed on the western bank of the Kanawha, and in tracing it northward until it sinks below the level of the river. The cause of Prof. Rogers' failure to find it southwest from the Great Kanawha was also brought to light, and with it some new and unexpected facts concerning the persistency of this great coal bed, which will have an important bearing on the future development of the *Pittsburg coal* in all the southwestern portion of the State.

Hitherto, geologists have looked upon the amazing persistency of the *Pittsburg bed* as one of the most wonderful features of the great

coal basin of the Ohio; whatever else might vary, it alone of all the coals, maintained a constant workable thickness over the thousands of square miles around which its outcrop has been proven, never once disappearing from the section. This continuity which seemed so universal that the field geologist would have staked his reputation on finding it of good mining thickness at any locality where its horizon was below him, does not hold along the Great Kanawha, and from other facts in my possession there are reasons for believing that large areas in West Virginia, hitherto supposed to be underlaid by this valuable bed, will be found, on exploration, entirely destitute of it, or containing only a tithe of its usual thickness.

How far to the northeast this unproductiveness may extend, where the horizon of the Pittsburg coal is buried from view under a great thickness of the Permian beds (No. XVI), is as yet, uncertain, but certainly beyond the Little Kanawha, since Dr. Stevenson of New York, has recently informed me that a section made in the vicinity of Burning Springs, Wirt county, and communicated to him, showed its complete absence at that locality.

It is also absent, or but poorly developed, in some portions of Jackson county, since a shaft sunk for silver near Angerona, beginning at the horizon of the Waynesburg coal, and descending to a depth of 600′, found only one small bed 6″–12″ thick somewhere between 300′ and 400′ from the surface. Of course very large areas of workable coal will be found on the Pittsburg horizon in these regions southwest from the Little Kanawha, but it is well for the mining geologists and others interested, to understand that extensive *barren areas* also exist; in other words the Pittsburgh coal, when followed southwestward from Harrison, Lewis and Gilmer counties, loses its character of unbroken persistency, everywhere else so well maintained, and becomes *patchy*, being entirely absent or quite thin over a considerable extent of territory, if one may judge from the widely separated points where it is found but poorly developed or entirely wanting.

Another peculiar feature of the coal geology along the Great Kanawha and adjacent regions, is an almost total disappearance of the remaining coal beds of the Upper coal measures coincident with the beginning of the irregularities in the distribution of the Pittsburg bed,—the Redstone, Sewickley and Uniontown beds being entirely absent, while the Waynesburg is reduced to 2′–3′ of generally worthless coal, and is often altogether absent.

Thus it would seem that by a singular coincidence, the Kanawha region, in which the coals of Nos. XII and XIII attain their greatest development, found the Upper Coal Measure epock (No. XV.) closing with much less coal included than in any other region of the great basin of the Ohio; for here the *coal making period* practically ended with the deposition of the beds in the Lower Coal Measures (No. XIII), since the 700 feet of *Barrens* (No. XIV) contain no

workable beds whatever, and but two or three thin coal streaks of any kind; the Pittsburgh coal becomes irregular and uncertain, while the only other bed (the Waynesburg) in its series (No. XV) is reduced to 2′ or less of worthless stuff, and above the latter I explored the Permian beds for 600′ without finding a single trace of coal.

It is possible that this partial failure of the *Upper coals* in the Kanawha region is not a mere coincidence with the great accumulations that took place under them at an earlier epoch, since the vast and orderly subsidence which rendered the large coal deposits of Nos. XII and XIII possible, may itself have been the subsequent cause of the evidently unstable conditions which prevented the great Pittsburgh marsh from covering the surface regularly, and with it practically closed forever the coal making epochs of the Carboniferous period in the Kanawha valley.

The highest beds of the Lower Coal Measures (No. XIII) sink below the level of the Great Kanawha near Charleston, and from that point northward to the mouth of Pocatalico river, eighteen miles below, the river hills are composed of the heavy sandstone, and red shale beds of the barrens (No. XIV). Here, near the mouth of the Pocatalico, however, the horizon of the Pittsburg coal is brought into the immediate river hills by the constant northward dip, and this famouse bed has long been mined by the Marmet Mining Company, at Reymond City, on the east bank of the Kanawha.

The main opening of this company is about three miles, from the river to which the coal is carried over a short railroad.

At the entrance to the mine the section of the coal is as follows:

1.	Sandstone				
2.	Shales, gray			10′	
3.	*coal*, impure	0′ 4″	Roof Coal.		10′ 3′
4.	Shale	0′ 4″			
5.	*coal*	0′ 6″			
6.	Shale	0′ 1″	3′ 5″		
7.	*coal*, slaty	1′ 0″			
8.	Shale	1′ 6″			
9.	*coal*, good, main bench		6′		
10.	Slate parting		0′⅛″-½″		
11.	*coal*, slaty		0′ 10″		
12.	Fireclay				

As will be seen from the section, this coal maintains a structure almost perfectly identical with its eastern type in southwestern Pennsylvania, northern West Virginia and western Maryland. The roof coal is not taken down, being left for support. It is here, as elsewhere, quite variable, a good exposure a few rods within the mine, revealing the following structure:

1.	Shale	0′ 8″	4′ 9″
2.	*Coal*	0′ 3″	
3.	Shale	0′ 2″	
4.	*Coal*	0′ 5″	
5.	Shale	0′ 3½″	
6.	*Coal*	0′ 5″	
7.	Shale	0′ 2½″	
8.	*Coal*	1′ 0″	
9.	Shale	1′ 4″	

The *main bench* never runs below 5′ in thickness at this mine, and is frequently 6′. It comes out in nice, large blocks, and being quite hard bears transportation exceedingly well. The coal has much *mineral charcoal* interlaminated, and exhibits a tendency to assum the "block" structure. It makes a splendid fuel for domestic purposes and for steam, but probably contains too much pyrites for use in the manufacture of iron.

This mine has a capacity of 400 tons daily, exclusive of nut coal; its output is shipped by river to Cincinnati and other markets.

The base of the coal at the opening has an elevation of 160′ above Kanawha river.

In descending from the summit of a steep hill that rises above the coal, along an old road, the following section of the Upper Coal Measures was obtained:

1. Sandstone, massive, *Westernport*, visible ..... 5′
2. Concealed with traces of red shale ..... 60′
3. Red shale ..... 30′
4. Sandstone, gray, micaceous ..... 4′
5. Red shale, *with limestone nodules at top* ..... 20′
6. Gray, sandy shales ..... 30′
7. Red shale ..... 40′
8. Buffish gray, sandy shales ..... 60′
9. *Pittsburgh sandstone*, flaggy ..... 30′
10. Shales ..... 10′
11. *Pittsburgh coal* ..... 10′

In descending this hill to a point a few rods west from the main opening, the following succession was revealed:

1. *Westernport sandstone* ..... 5′
2. Concealed ..... 110′
3. Red shale, full of *white limestone nodules* in upper portion ..... 70′
4. Sandy shales ..... 55′
5. Thin streak of dark shales (*Redstone coal*) .....
6. Sandstone, Pittsburgh ..... 35′
7. Concealed to base of Pittsburgh coal ..... 20′

I have identified No. 1 of these sections with the massive bed of sandstone that caps the summit of Westernport hill near the town of that name in Maryland, since it is quite massive, and comes at the same elevation above the Pittsburgh coal as the Westernport sandstone. It is a coarse, yellowish-gray rock and the remnant of it left

from erosion, crowns the summit of the knob directly above the Marmet or Raymond City mines.

At 180′–190′ above the Pittsburgh coal is an important geological horizon, since it marks the occurrence of the *only limestone* in the Upper coal measures along the Great Kanawha. This limestone appears at the top of a thick bed of red shale, and occurs on the surface in the form of rounded white nodules from the size of marbles up to one foot in diameter. These break with a sharp, clean fracture and have a reddish cast within. The bed is apparently about 5′ thick, and is the sole representative of the Great Limestone of southwest Pennsylvania and the adjoining counties in West Virginia, where it has a thickness of 80′-100′. This bed will burn into a good quality of lime for agricultural purposes, and the farmers along the Lower Kanawha should avail themselves of it much more frequently than they do. Its horizon is especially valuable as a guide or key to the horizon of the Pittsburgh coal where that bed sinks below the level of the Kanawha river, ten miles north from this locality.

In the immediate vicinity of Raymond City, P. O., the Kanawha river bluff rises percipitously to an elevation of 450′; in descending from its summit this succession was observed :

1. Red shale and concealed..... 70′
2. *Raymond limestone*..... 5′
3. Red and greenish shales and concealed..... 65′
4. Greenish shales, alternating with grayish-green micaceous sandstones..... ..... 70′
5. Massive sandstone..... 15′
6. Concealed .... 20′
7. Massive sandstone, *Pittsburgh*..... 25′
8. Horizon of *Pittsburgh coal* (absent in this section).....
9. Concealed to low water in Kanawha river.....180′

The *limestone* seen in the two former sections also occurs in this one as No. 2; I have designated it, from this locality, the Raymond limestone.

That the Pittsburgh coal is wanting in this section was a discovery made by the Marmet Mining Company, much to its cost. A few inches of coal were found at the horizon of the Pittsburgh bed immediately under No. 7 of our section, and the company conceived the idea of following it into the hill until it should thicken up into a workable bed, and then continuing the drift through the bluff to reach their coal lands lying some distance west from the river, thus permitting them to load their coal directly into the boats over a short incline. A tunnel was accordingly driven into the hill for several hundred feet, at a cost variously estimated at $30,000 to $60,000, but the coal not only did not thicken up, as expected, but actually disappeared, leaving them nothing but solid sandstone through which to drive the tunnel, which was finally abandoned.

In descending this knob a short distance farther south, the following succession was observed :

1. Red shale..... 25′
2. Shales and sandstone..... 55′
3. *Raymond limestone*..... 5′
4. Red shale..... 60′
5. Sandy shale, grayish green, micaceous..... 75′
6. Concealed..... 25′
7. Sandstone, massive, *Pittsburgh*..... 25′
8. Concealed, (in this occurs the horizon of the *Pittsburgh coal*..... 30′
9. Varigated shales, red and green..... 10′
10. Sandstone..... 5′

Red shale..... 5′

12. Sandstone, massive, visible..... 10′
13. Concealed to level of low water in Kanawha river (about 530′ A. T.).....135′

Although the Pittsburgh coal is absent from these sections, it again makes its appearance in the hills on the opposite, or west side of the Kanawha, and was once mined on the land of Dr. James Stewart, twenty-five years ago The mine has long been abandoned, and the opening having fallen in, the coal can not now be seen, hence the information that I obtained concerning it I owe to the kindness of Dr. Stewart, who reports that the *roof coal* was absent entirely, the *main bench* was 3′ thick, and of excellent quality, while one foot of slaty coal came at the bottom.

The locality of the opening is about one and one-half miles south 50° west from that of the last section, and the base of the coal has an elevation of 220′ above the Kanawha. The bed underlies more than two hundred acres on the land of Dr. Stewart, but shoots into the air in passing southward up the Kanawha from his farm.

The following section of the rocks was obtained in descending the hill past Dr. Stewart's old opening in this coal :

1. Concealed from top of hill.....60′
2. *Pittsburgh sandstone*, somewhat massive, making a steep bluff.....50′
3. *Pittsburgh coal*..... 4′
4. Concealed.....100′
5. Red shales.....30′
6. Gray, sandy shales.....20′
7. *Dark Coaly streak*..... 0′ 6″
8. Red and variegated shales with some fireclay at top...20′
9. Massive sandstone (Morgantown ?) visible to level of Wills' creek.....10′
10. Concealed by terrace deposits to level of the Kanawha river.....40′

It is possible that No. 9 may represent the *Morgantown sandstone*

horizon, but it comes rather higher in the series than that bed should occur in the Kanawha where the *Barrens* are so thick.

The Queen City Coal Company has recently begun mining operations on the Pittsburgh coal, one mile and a half below Raymond City and nearly opposite Elsinore P O.

The mouth of the mine is about a half mile from the river, on a small stream which puts into the eastern shore of the Kanawha, and the entry has been driven several hundred feet into the hill. So far, the coal is quite irregular, varying much in thickness, and cut by frequent "clay veins."

The following is an average section of that already developed :

1.	Sandstone, Pittsburgh	
2.	Fireclay shale	3′ 0″
3.	*Coal*, main bench	3′ 0′
4.	Slate parting	¼′ 2″
5.	*Coal*	1′ 0″
6.	Fireclay	2′ 6″

The main bench contains much *mineral charcoal*, so much in some cases, as to render it a genuine "splint." It contains considerable pyrites, but not enough to unfit it for steam and domestic purposes.

The *bottom coal*, No. 5, is quite good at this locality, and the Superintendent informs me that it is all merchantable coal down to the fireclay.

As will be observed from the section, the *roof coal* is, as yet, entirely absent from this mine, but as the fireclay shale, which always separates it from the *main bench* is present, the former bed may come in when the entry is pushed farther east. It is also expected by the mine boss that the main bench will get thicker in that direction, and more regular, all of which may, or may not occur.

The blossom of the Pittsburgh coal is frequently visible in the fields and along the streams which put into the Great Kanawha, as we descend that stream from the mines of the Queen City Coal Company, but no workings have yet been opened on it until we come to the Oak Ridge mines, three miles below Winfield, and eight miles below the mouth of Pocatalico river. Hence the inference is strong that the *coal* in this intervening region is quite thin, or it would have been opened up for domestic supply, as the farmers report ploughing up its blossom at the proper horizon for this bed.

The general dip through this region is northwestward ; the coal also sinks toward the southwest. The dip from the mouth of Pocatalico to Oak Ridge is 160′ in a distance of eight miles, or 20′ to the mile.

In the vicinity of Winfield, an enormous sandstone first makes its appearance in the river hills, making a long line of massive-looking cliffs, 375′–400′ above the level of the stream. Great blocks from it have been broken away and rolled to the valley below, where they

furnish good building-stone. The rock is quite coarse, containing streaks of small quartz pebbles, is of a yellowish brown color, soft enough to dress easily, and splits quite freely. I did not get an opportunity to determine its exact horizon above the Pittsburgh coal, but as it can not be less than 350′ above the latter, this sandstone is most probably identical with the Waynesburg, at the top of the *Upper Coal Measures*.

Near the mouth of Big Hurricane creek, the Pittsburgh coal has been extensively mined, as already stated, by the Oak Ridge Coal Company; there the following section (Figure 3) was obtained by connecting the good exposures on the east side of the Kanawha with the Oak Ridge mines on the west side:

1.	Red shale		20′
2.	Sandstone, massive, visible		5′
3.	Concealed with very small limestone nodules in red shale toward the base		25′
4.	Shales, greenish, sandy, with limestone and iron ore nodules near centre		20′
5.	Red shales		15′
6.	Sandstone, massive, visible		3′
7.	Concealed and red shale		10′
8.	Sandstone, massive in upper part, greenish		35′
9.	Greenish sandy shales and flaggy sandstone		35′
10.	*Raymond limestone*		5′
11.	Red shale		25′
12.	Sandstone, rather massive, coarse		20′
13.	Concealed with much showing of red shale		45′
14.	Concealed		65′
15.	*Pittsburgh sandstone*		35′
16.	*Pittsburgh coal*	coal	0′ 4″
		cannel, impure, with streaks of coal	0′ 8″
		fireclay	0′ 4″
		coal, hard	1′ 8″
		coal, softer, best in bank	2′ 0″
		coal, slaty, thickness unknown	
			5′
17.	Concealed to ordinary level of Kanawha river		20′

Much trouble has been experienced in the working of the Pittsburgh coal at this locality, on account of its proximity to the river, since a rise of only 20′ is sufficient to flood the entries, but Mr. J. T. Bowyer, of Winfield, the proprietor of the mine, is now having a slope sunk to the coal, beginning about 65′ above the level of low water, hoping to thus avoid further trouble from this source. The mine had but recently been flooded when I visited the locality, and hence could not be entered, so that the measurements and details of the structure of the coal given above, were taken from the statements of Mr. Bowyer and one of his miners. As no coal was on the dump at the time, I can say nothing as to its quality, though the appear-

ances of the mine water would indicate that it contains considerable sulphur

The Raymond City limestone, No. 10 of the section, still retains its place in the series, cropping out in this vicinity on both sides of the river more than 200′ above the same. It occurs in white-looking roundish nodules one inch to one foot in diameter, in a matrix of red shale.

A few limestone nodules also occur in Nos. 2 and 4, but none of them are more than one inch in diameter, and they are quite scattering.

This section extends to nearly 360′ above the Pittsburgh coal, and yet no signs of the Waynesburg bed, or of its overlying massive sandstone, were seen on the east bank of the river. After leaving the locality, however, I learned that a small coal-bed, 1′-2′ thick, was once opened away back on top of the hill, on the west bank, under a massive sandstone, so that it is doubtless the Waynesburg coal, which would here seem to come more than 360′ above the Pittsburgh bed, (360′ is the average interval between these two beds in Greene county, Pennsylvania, and the adjoining county (Monongalia) in West Virginia, though it cannot be more than 400′, and possibly not more than 375′.

Two very broad terraces occur along the banks of the Kanawha in this region, one at 45′-50′ above low water, and another at 75′-80′ above the same datum.

Just below the Oak Ridge mines, a local roll passes across the measures, and the Pittsburgh coal rises westward, but the dip soon flattens and the northwest slope being resumed, soon carries the coal under the Kanawha river, and it is seen no more in Putnam county along that stream.

A short distance west from Oak Ridge mine, the Pittsburgh bed is mined for local use by Mr. Ventrue, and it underlies a large area here near the mouth of Big Hurricane creek, where it could be easily mined. The coal at Ventrue's has the same structure reported as that given for Oak Ridge.

At Armstrong's Landing, four miles below the mouth of Big Hurricane creek, the following section (Figure 2) was obtained in descending the steep hill side, on the east bank of the Kanawha:

1. Flaggy sandstone and concealed.....35′
2. Red shale and concealed.....35′
3. Sandstone.....10′
4. Red shale ..... 5′
5. Sandstone, very coarse, massive, yellowish brown, micaceous, (*Waynesburg*).....35′
6. Red shales.....40′
7. Sandstone, massive, visible..... 5′
8. Red shales and concealed.....35′
9. Sandstone, flaggy and massive.....25′

10. Red shales and concealed..... 125′
11. Terrace deposits to low water in Kanawha.....55′

Total.....405′

I have identified No. 5 with the Waynesburg standstone, since it comes at the same horizon as the great cliff rock in the hills at Winfield, and below. It is quite massive here, and juts out in a bold line of cliffs 285′ above the level of the river, and if the identification is correctly made, this would indicate that the Pittsburgh coal horizon has dipped down below the Kanahwa 75′ to 100′ at this locality.

The Raymond limestone should be at least 80′–90′ above water level in this vicinity, but as it was not seen, it is probably covered up in the largely concealed interval below the middle of No. 10.

As we proceed north down the Kanawha from Armstrong's landing, the rocks continue dipping northwestward, and the Pittsburgh coal consequently gets deeper and deeper below the level of that stream.

The Waynesburg and Westernport sandstones make frequent cliff outcrops along the bounding hills, capped above by the red beds of the Permian.

No coal was heard of until we came to the vicinity of Buffalo, near the northern line of Putnam county, where a small bed is reported to have been opened in the summit of the hill, one to two miles from the river, on its east bank. This would most probably be the Waynesburg.

On going farther north to the mouth of Arbuckle creek, in Mason county, the Waynesburg coal comes into the steep bluff immediately overlooking the east bank of the Kanawha, where it was once mined by Mr. G. W. Craig.

In descending to the river at this locality, just above Arbuckle P. O., the following section (Fig. 1) was obtained:

1. Deep red, marly shales, with *limestone nodules* in lower portion.....30′
2. Gray shales.....10′
3. *Waynesburg sandstone*, massive.....50′
4. Gray, sandy shales containing *fossil plants*.....8′–10′
5. *Waynesburg Coal*
   - coal, rotten, shaly.....0′ 10″
   - coal, soft, much sulphur.....0′ 8″
   - shale, dark.....0′ 5″
   - coal, good.....0′ 8″
   - coal, very slaty.....0′ 5″

   } 3′
6. Fireclay.....—
7. Concealed.....40′
8. Massive sandstone, *Westernport* (?), visible..... 5′
9. Concealed, with massive sandstone at base.....50′
10. Concealed to level of low water in Kanawha.....90′

No. 5, the Waynesburg sandstone, makes a great overhanging cliff

at this locality, and the rock is quite coarse and massive. The shales between it and the coal are *plant bearing* here as they are at so many localities along the northern portion of the state, but the shale had all slacked down and I was unable to procure any fossils from it in a determinable shape. Mr. Craig informs me that he has seen the impressions of very beautiful ferns in the shales at this horizon.

The Waynesburg coal-bed still exhibits the three-fold structure which it mainta with such surprising regularity at the northern line of the state. The section of it as given above, is on the authority of Mr. Craig, a very accurate and careful observer who has dug coal from it. The mine has not been in operation for several years, and had consequently fallen in when I visited the locality, so that only a portion of the coal could be seen, but the above section of it may be regarded as perfectly trustworthy.

Mr. Craig reports that the eight inches of coal just above the bottom portion came out in nice clean blocks of as pure and excellent coal as one could wish, but that all the rest of the bed was slaty and sulphurous.

A short distance up the river from the line of section, the Westernport sandstone, No. 8, makes a bold cliff twenty-five feet high, and has there been extensively quarried for building-stone. It is a coarse, grayish-brown rock, rather soft, and splits well into blocks of most any desirable size. I have provisionally identified this stratum with the Westernport sandstone, or the massive rock wihch is usually found at about 290′–300′ above the Pittsburgh coal, though it is possible that the massive sandrock, at the base of No. 9, should represent this bed.

The lower half of No. 1 contains many reddish, hard, *limestone nodules* one-half to one inch in diameter, which weather white when exposed to the air.

The Pittsburg coal horizon should be found here at a depth below the Kanawha river, not exceeding 200′, and possibly not more than 180′, though nothing but the drill can decide the question as to whether the coal exists here, or otherwise. As throwing some light on this question, Mr Craig reports that Mr. Wm. Arbuckle, in boring a salt well many years ago, at Leon, near the mouth of Thirteen Mile creek, three miles below here, passed through a bed of coal 6′ thick, at a moderate depth below the river. If this be correct, it would of course represent the Pittsburgh, since no other bed of that size would be found for a depth of 700′–800′ below the river at this point, the *Lower Coal Measures* of the upper Kanawha being here buried under the entire thickness of the Barrens (600′–700′) and that portion of the *Upper Coal Measures* below water-level.

In descending a steep hill to the river, one mile below Arbuckle, and just opposite Mr. Craig's, the following succession appears :

1. Red shale, flaggy sandstone and concealed.....100′
2. Red shale and concealed..... 45′

3. Horizon of *Waynesburg coal* (according to Mr. Craig) —
4. Flaggy sandstone..... 10′
5. *Westernport sandstone*, massive..... 30′
6. Red shale, flaggy sandstone, and concealed..... 30′
7. Sandstone, visible..... 5′
8. Red shale, and concealed to top of 2nd terrace..... 30′
9. Concealed to top of 1st terrace..... 20′
10. Concealed to low water in Kanawha river..... 50′

If the horizon of the Waynesburg coal is correctly placed in this section (on the authority of Mr. Craig, who says he has dug and ploughed up its blossom here), it shows that the rocks have begun to rise toward the northwest, since the place of the coal is 25′ higher in this section, than in the former. As I did not follow the river any further north, this question was left undetermined.

No. 5 juts out of the hill in a very bold cliff, and if the Waynesburg coal comes above it, this would represent the Westernport bed. It is soft, coarse, micaceous, and speckled with oxide of iron.

The Waynesburg coal has been mined by Mr. McClure on a branch of Arbuckle creek, two or three miles from the river, where it exhibits the following structure, according to Mr. Craig:

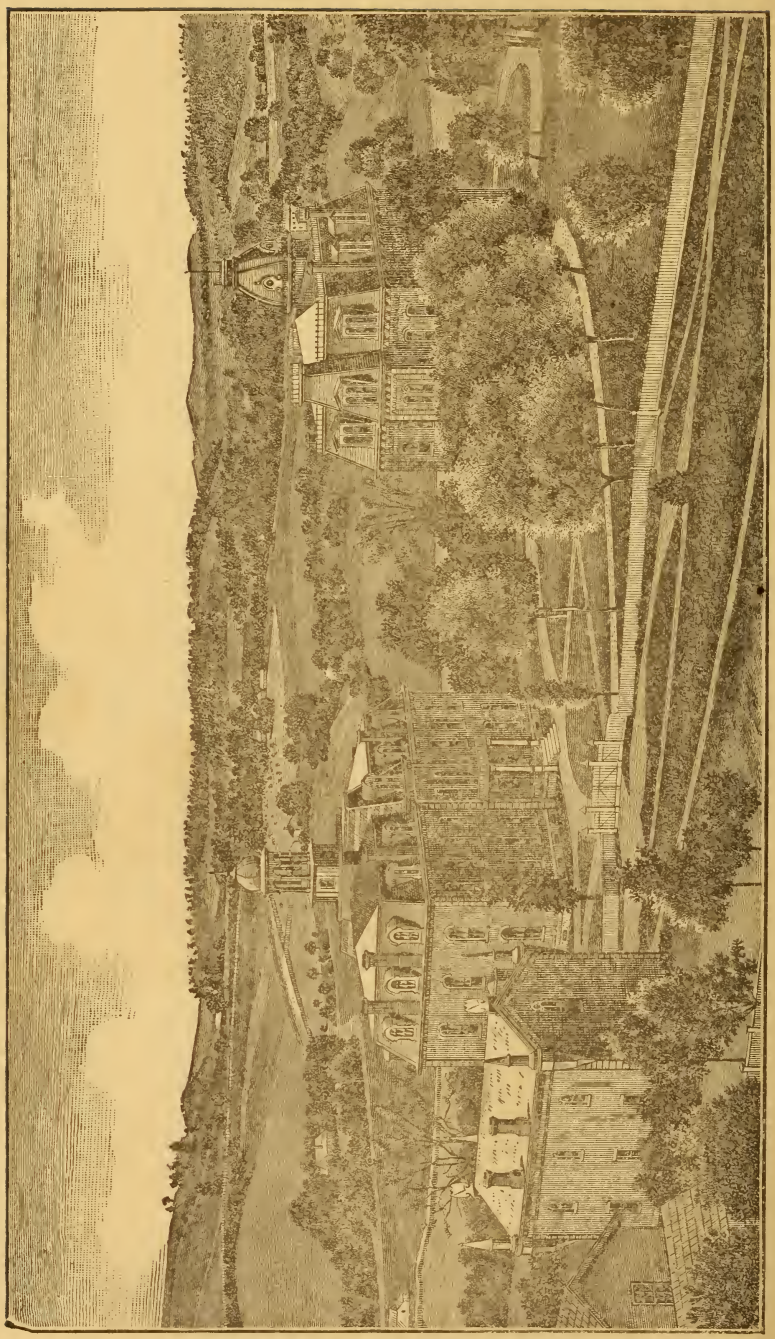
1. Coaly slate.....	0′ 6″	3′ 2″
2. Coal, soft, sulphurous.....	0′ 10″	
3. Sandstone, with coal streaks.....	0′ 10″	
4. Coal, good.....	1′ 0″	

It is also mined on the land of Mr. Harvey, on Bear branch of Arbuckle, where it exhibits very much the same section as given above.

The Waynesburg coal is mined for local supply on the land of Mrs. Miller, one and one-half miles northeast from Union school house, at the head of Poplar creek, about four miles east from the Kanawha river, and there I got the following:

1. Waynesburg sandstone.....			35′
2. *Waynesburg coal*	coaly slate.....	0′ 8″	2′ 10″
	dark shale.....	0′ 6″	
	coal, visible.....	1′ 8″	

The sandstone is quite coarse, and even full of small quartz pebbles in streaks. It makes a great cliff along the hills. The lower portion only of the coal is used, and it is quite impure. It has an elevation of 180′ above the level of the Kanawha river.



WEST VIRGINIA UNIVERSITY.

CATALOGUE

—OF—

West Virginia University,

MORGANTOWN,

FOR THE YEAR 1883-4.

WHEELING:
CHAS. H. TANEY, STATE PRINTER.
1884.

Calendar.

The University year includes forty-one weeks, and is divided into three terms.

The First Term begins on the first Wednesday of September, the second on the fourth Wednesday of November, and the third on the second Wednesday of March.

The Annual Commencement is on the second Thursday of June.

Prompt attendance at the beginning of each term is very important to the student.

1884.

June 8th—Sunday, 8 p. m., Essays before the Young Men's Christian Association.

9th—Monday, 8 p. m.—Baccalaureate Sermon.

10th—Tuesday, 8 p. m.—Regents' Prize Contest.

11th—Wednesday, 8 p. m.—Address to the Literary Societies.

12th—Thursday, 9 a. m.—Commencement; 2 p. m.—Anniversary of West Virginia Historical Society.

September 4th—Wednesday—Examination of Candidates for admission.

September 5th—Thursday—Session 1884–5, begins.

November 26th—Winter Term begins.

March 11th—Spring Term begins.

April 10th—Junior Exhibition.

June 11th—Commencement.

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ABBREVIATIONS.

Met.—Metaphysics. Ma.—Mathematics. A. L. Ancient Languages. M. L.—Modern Languages. E.—English. H.—History. A.—Agriculture. C.—Chemistry. Ph.—Physics. Anat.—Anatomy, Physiology and Hygiene. G.—Geology. B.—Botany. Z.—Zoology. Students still under the former curriculum are designated by their classes. Soph.—For Sophomore. Jr.—Junior. Sen.—Senior. Class.—Classical. Sci.—Scientific. Those who also have studies in the Preparatory Department—P.

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ALKIRE, W. S.....Lewis Co.....E.
ANDERSON, E. H.....Monongalia Co...Class., Jr.
ARMSTRONG, R. A.....Upshur Co.....Met., E., M. L., Ph.
ARMSTRONG, R.....Putnam Co.....Sci., Jr., Ph.
BARB, W. T. W.....Monongalia Co...Sci., Sen.
BLAND, W. T.....Lewis Co.....Law.
BERKELEY, R. C., JR.....Monongalia Co...Ma., Met. Z., G., E., C.
BERKELEY, W. N., JR.....Monongalia Co...A. L., B., Ma., C.
BOYD, G. E., Jr.....Ohio Co.....Ma., A. L., H.
BLAND, M.....Lewis Co.....Law.
BRAND, H.....Monongalia Co...B., P.
BUSH, A. B.....Gilmer Co.....Ma., M. L., E., A. L.
CHARLES, J. E.....Mason Co.....Ma., M. L., Ph.
CORKE, J. F.....Harrison Co.....Law.
COUCH, L. W.....Mason Co.....Ma., A. L., H., Law.
COX, I. S.....Marion Co.....Ma., Anat., P.
COX, J. D.....Marion Co.....E., Ma., P.
DAWSON, R. W.....Fayette Co. Pa.....E., Ma., A. L., H., B.
FLEMING, H.....Ritchie Co.....Class., Jr., Ph.

STUDENTS---Continued.

GARDNER, R. S.....Harrison Co.....B., H., P.
GOFF, C. P..... Randolph Co.....A. L., M. L.
GRADY, C. P..... .....Kanawha Co.....P., Ph.
HARRISON, R. H..... .....Lewis Co.....Law.
HAUGHT, F. T.....Monongalia Co...Anat., C.
HAWTHORNE, J. E.....Monongalia Co...Ph., C.
HAYES, C. A.....Monongalia Co...H., M. L., P., C.
HELMICK, M. D..... .....Monongalia Co...P., Ma.
HODGE, A..... .....Monroe Co.....H., P.
HUGHES, M. S.....Monongalia Co...Law.
HUGHES, E. H.....Monongalia Co...Ma., A. L., P.
JEMISON, D. L.....Monongalia Co...E., P.
JOHNSON, W J..... ....Harrison Co.....Anat.
JENNINGS, A. J .. ..Appleton City, MoH., P., Law.
LAIDLEY, P. W.....Kanawha Co.....P., M. L.
LAZZELL, I. G..... .....Monongalia Co...Law.
LATHAM, P..... .....Monongalia Co...Anat.
LATHAM, G..... .....Monongalia Co...Law, Ph., C.
LAWSON, E. W.....Harrison Co.....Ma., M. L., E., C.
LEACH, J. E.....Wood Co.....Ma., A. L., M. L.
LIVELY, F..... .....Summers Co.....E., P., Law.
MEADOWS, B. W.....Gilmer Co..... ....E., Ma., Met , M. L.
MICHAEL, W. H . ...Preston Co.....Class., Sen., Ph.
MICHAEL, J. C.. .....Preston Co.....Ma., E., P.
MORGAN, G. W.....Monongalia Co...B., C.
MORGAN, B. S.....Monongalia Co...Law.
OGDEN, H. C..... .....Marion Co.....Ma., P., E.
RECTOR, T. G.....Wood Co.....Ma., E., M. L., Ph.
RECTOR, E.....Wood Co.....Ma., P., B., E.
ROBINSON, H. L.....Fayette Co. Pa.....Class., Sen.
ROBINSON, GEO. P..... .....Baltimore, Md.....H., P., M. L., B.
ROMINE, A. L.....Harrison Co.....Ma., E., P., H.
RUFFNER, A..... ...Kanawha Co.....Ma., P., B., Ph., C.
SHEPHERD, T. R.....Jefferson Co.....E., Ma., A. L.
SHUGERT, G. N..... ..... Jefferson Co .....H., E., Ma., C.
SMITH, H. F..... .. ..Fayette Co Pa.....Ma., E.
STRIBLING, G. W..... .... Point Pleasant.....Ma., M. L., C.

STUDENTS---Continued.

STUART, W. S.....Doddridge Co.....Ma., E.,A. L., M. L.
STURGISS, H. J.....Fayette Co., Pa...Law, P.
STURGISS, W. J..... .....Fayette Co., Pa...Law, P.
SWAN, LEROY..... .....Tyler Co.....Ma., M. L., B., E.
SWEENEY, J. D.. .....Tyler Co.....Sci., Jr.
TAPP, R. W.....Monongalia Co...Class., Jr., C., Ph.
THOMAS, F. M.....Preston Co.....Ma., M. L., E., C.
WATERS, N. M.....Preston Co.....E., Ma., A. L., B.
WILSON, B C.....Kanawha Co.....P., M. L.
WORKMAN, R.....Mineral Co.....Anat., C.

Preparatory Students.

ALEXANDER, HENRY R. ..... Putnam County.
ALEXANDER, GEORGE M. ..... Monongalia County.
BIRKETT, ROBERT F. ..... Ohio County.
CARPER, WILLIAM B. ..... Upshur County.
CHAMBERLAIN, ELMER V. ..... Kanawha County.
COBUN, WILLIAM S. ..... Monongalia County.
COLE, GIDEON ..... Monongalia County.
ENGLISH, LEWIS S. ..... Mason County.
GREGG, JOHN M. ..... Morgantown.
GRUMBINE, CHARLES F. ..... Harrison County.
HARTMEYER, CHRISTIAN ..... Preston County.
HOUSTON, HOFF ..... Monongalia County.
KEENER, GEORGE I. ..... Morgantown.
KIRKHART, JAMES A. ..... Monongalia County.
LAZZELL, JOSEPH E. ..... Monongalia County.
MARSHALL, J. O. ..... Hancock County.
NEWLON, JOSEPH A. ..... Upshur County.
RADER, EMERSON H. ..... Nicholas County.
RECTOR, JAMES C. ..... Wood County.
REED, JOHN B. ..... Monongalia County.
RHODES, WILLIAM E. ..... Lewis County.
ROBINSON, JOHN T. ..... Brooke County.
RYLAND, HENRY H. ..... Fayette County, Pa.
SISLER, GEORGE W. ..... Monongalia County.
STARK, ELBIN B. ..... Putnam County.
STRODE, EDWARD L. ..... Jefferson County.
WHITE, WILLIAM J. ..... Monongalia County.
WILSON, THOMAS M. ..... Monongalia County.
YOST, LAMARD H. ..... Marion County.

NUMBERS IN THE SEVERAL SCHOOLS.

Chemistry	13
Physics	12
Anatomy, Physiology and Hygiene	5
Zoology	6
Geology	5
Botany	11
English	24
Metaphysics	11
Mathematics	33
Latin	12
Greek	8
French	13
German	17
History	18
Law and Equity	13
Preparatory Department	28
Some Study in Preparatory Department	21

Recapitulation.

BY COUNTIES IN WEST VIRGINIA.

Brooke	1
Doddridge	1
Gilmer	2
Harrison	6
Jefferson	3
Kanawha	5
Lewis	5
Marion	4
Mason	4
Mineral	1
Monongalia	30
Monroe	1
Nicholas	1
Ohio	2
Preston	4
Putnam	4
Randolph	1
Ritchie	1
Summers	1
Tucker	1
Tyler	2
Upshur	3
Wood	4
Total	88

RECAPITULATION BY STATES.

West Virginia	88
Pennsylvania	6
Maryland	1
Missouri	1
Total	96

NUMBER OF STUDENTS EACH YEAR.

The following is an exhibit of the number of students enrolled annually from the beginning:

The year 1867–8, shows a total of 124.
The year 1868–9, shows a total of 154.
The year 1869–70, shows a total of 161.
The year 1870–1, shows a total of 166.
The year 1871–2, shows a total of 159.
The year 1872–3, shows a total of 144.
The year 1873–4, shows a total of 138.
The year 1874–5, shows a total of 125.
The year 1875–6, shows a total of 96.
The year 1876–7, shows a total of 93.
The year 1877–8, shows a total of 118.
The year 1878–9, shows a total of 135.
The year 1879–80, shows a total of 132.
The year 1880–1, shows a total of 162.
The year 1881–2, shows a total of 177.
The year 1882–3, shows a total of 159.
The present year shows a total of 96.

Vocal Music.

D. B. PURINTON, A. M., INSTRUCTOR.

Some years ago, the Regents added Vocal Music to the Studies of the University. It is open, free of charge, to the students of all departments alike. The course of instruction embraces one year, as follows:

FALL TERM—Rudiments and Elementary Practice.

WINTER TERM—Rudiments continued. Glee and Chorus Singing.

SPRING TERM—Lectures on Harmony and Composition, Chorus Singing, Review, &c.

STUDENTS, 1883-4.

ALEXANDER, H. R.
COUCH, L. W.
GRADY, C. P.
GREGG, J. L.
HELMICK, M. D.
HODGE,, A. A.
JEMISON, D. L.
LAIDLEY, P. W.
LAZZELL, J. E.
LIVELY, W. F.
RECTOR, T. G.
RECTOR, E.
RUFFNER, A.
SISLER, G. W.
WILSON, B. C.
WILSON, T. M.
WHITE, W. J.
YOST, L. H.

Degrees and Certificates.

The following Degrees were conferred at the last Commencement:

MASTERS OF ARTS.

JOHN NELSON MARSH, GEORGE A. PEARRE,
A. A. WATERS.

MASTERS OF SCIENCE.

CHARLES EDWIN GRAFTON, B. L. KEENAN.

BACHELORS OF ARTS.

GEORGE C. BAKER, GEORGE B. FOSTER,
LUTHER M. BOYERS, WALTER HOUGH,
BENJAMIN BROWN, ISAAC G. LAZZELL,
SAMUEL B. BROWN, JACOB F. CORKE,
JOHN E. MUSGRAVE.

BACHELORS OF SCIENCE.

WILLIAM T. BLAND, JOHN L. JOHNSTON,
S. P. WELLS, JR.

BACHELORS OF LAW.

FRANK COX,.....Monongalia County.
SAMUEL A. HAYS,.....Gilmer County.
MELVILLE PECK,.....Barbour County.
WILLIAM RICH,.....Monongalia County.
JOHN W. WILTSHIRE,.....Jefferson County.

DEGREES AND CERTIFICATES.----Continued.

GRADUATES IN SCHOOLS.

Ancient Languages.....ROBERT C. BERKELEY, JR.
Chemistry.....PERCY LATHAM.
" .....WILLIAM M. SPRIGG.
English.....JAMES W. HARTIGAN.
Geology and Natural History.....JAMES W. HARTIGAN.
Physics.....ROBERT C. BERKELEY, JR.

PROFICIENTS.

Chemistry.....R. A. STEWART.
" .....P. H. STRAUSZ.
Anatomy.....PERCY LATHAM.
Anatomy, Physiology and Hygiene.....WILLIAM M. SPRIGG.
Physiology and Hygiene.....MAT. S. HUGHES.
" " .....JAMES W. HARTIGAN.
German.....GEORGE N. SHUGERT.

CERTIFICATES OF PROMOTION.

Junior French.....MELVILLE H. FLEMING,
CHARLES P. GOFF,
B. W. MEADOWS.
Junior German.....ROBERT C. BERKELEY, JR.
Junior Greek.....A. B. BUSH,
WM. N. BERKELEY, JR.,
LEWIS CORE,
M. H. FLEMING,
M. D. NUTTER.
Junior Latin.....WM. N. BERKELEY, JR.,
LEWIS CORE,
R. W. DAWSON,
M. H. FLEMING,
F. SNIDER,
GEO. SHUGERT,
H. YOKUM.
Inter. Latin.....N. D. ADAMS,
A. B. BUSH,
M. D. NUTTER.
Junior Mathematics.....WM. N. BERKELEY, JR.,
R. W. DAWSON,
E. S. ELLIOTT,
B. W. MEADOWS,
F. SNIDER,
E. W. LAWSON,
Inter Mathematics.....A. B. BUSH.

Course of Study.

The Board of regents, at the annual meeting in June, 1882, acting upon the unanimous request of the Faculty, abolished the Curriculum and distributed the course of study into ten* independent Schools, of which eight are academic and two professional. The object of this change is to allow greater freedom in the selection of sudies and to elevate the standard of instruction and attainment.

But while the course is elective, the Faculty will advise students as to the choice and arrangement of their studies, and always encourage a complete and regular course.

Each student in the academic Schools is required to attend at least three Schools, and to adhere throughout the session to the studies selected on his matriculation, unless the Faculty, for cause shown, allow him to attend a less number or to make an exchange.

Students will be classed in the several Schools, according to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

ADVANTAGES OF THIS SYSTEM.

It is believed that this change, while producing some confusion and misconception at the outset, will eventually make the University more useful in the work of higher education and commend it to a wide patronage in the State, and while adapting its courses to the want of preparation or the irregular preparation of so many of the youths who seek liberal culture, will make its degrees attainable in the time usually required for

*Changed to nine in June, 1883.

the curriculum courses, or, in less time, if the student enters well advanced and is diligent in study.

Its advantages to the student are that he may pursue the studies of any School for which he is prepared, without regard to his deficiency in other studies; that he receives his diplomas in the several Schools in the order in which he completes them; that if he is able or desires to take but a partial course, he may adapt that course to his tastes or his necessities in life; and that he is put upon a footing of social equality with his fellows, and thrown upon his individual efforts, as will soon happen in actual life, for success and distinction in academic study.

The academic Schools are as follows:

I. Ancient Languages.
II. Modern Languages.
III. English.
IV. Geology and Natural History.
V. Mathematics.
VI. Agriculture, Physics and General and Applied Chemistry.
VII. Metaphysics and History.

The Professional Schools are:

I. Law and Equity.
II. Anatomy, Physiology and Hygiene.

Announcement

OF THE INDIVIDUAL PROFESSORS.

ACADEMIC SCHOOLS.

I—SCHOOL OF ANCIENT LANGUAGES.

PROF. BERKELEY.

The subjects taught in this school will be:

I. The Latin Language and Literature, in which there will be three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used:

1. *Junior Class*—Virgil's Bucolics and Georgics, Horace, Odes and Epodes; Cicero de Senectute and De Amicitia, and Gildersleeve's or Allen's Latin Grammar and Exercise Book.

2. *Intermediate Class*—Horace, Satires and Epistles, Livy, Latin Prose Composition, and Grammar and Bender's Roman Literature.

3. *Senior Class*—Cicero de Officiis, Tacitus, and exercises in Latin Composition. In this class a private course of parallel reading will be prescribed.

Lexicons Recommended for Each Class—White's, Andrews', or Freund's Leverett's.

II. The Greek Language and Literature, in which there will be also three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used:

1. *Junior Class*—Herodotus, Homer's Iliad and Odyssey; Jones' or White's Greek Prose Composition, and Goodwin's Grammar.

2. *Intermediate Class*—Xenophon's Memorabilia, Plato's Apology and Crito, Boise's Greek Syntax, or Sidgwick's Greek Prose Composition, Goodwin's Grammar and Jebb's Greek Literature.

3. *Senior Class*—Eurpides, Demosthenes, Sophocles, and Exercises in Greek Composition. A private course of parallel reading will also be prescribed for this class.

Lexicon for Each Class—Liddell and Scott's. The abridged edition for the Junior Class. The Unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

II—SCHOOL OF MODERN LANGUAGES.

PROF. HARVEY.

In this School are taught French and German. In each language there are two classes, junior and senior. The junior classes are thoroughly drilled in the Etymological forms and are practiced in the simpler forms of Syntax. The aim in the senior classes is to give facility and accuracy in translation. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the senior classes.

Text Books.

Junior French.—Languellier and Monsanto's Course; Smith's Reader; Telemachus, Picciola, or selections from modern authors.

Senior French.—Voltaire's Charles XII, Corneille's Cid, Racine's Athalia, Mollere's Misanthrope, Hugo's Hernani, Brachet's Grammar, and Saintbury's Literature.

Junior German.—Woodbury's Complete Course. Otto's Reader, Schiller's Jungfrau or Wilhelm Tell, or selections from modern authors.

Senior German. — Goethe's Iphigenia, Fouque's Undine, Goethe's Hermann and Dorothea, Lessing's Minna von Barnheim, Cook's Grammar, and Conant's Literature.

Reference Books.

French.—Spiers and Surenne's, Gasc's or Masson's Dictionary; Branchet's Historical, or Wall's Student's Grammar; Van Laun's or Saintbury's Literature.

German.—Adler's, Whitney's or Longman's Dictionary;

Whitney's or Brandt's Grammar; Hosmer's or Harrison and Gostwick's Literature.

III—SCHOOL OF ENGLISH.

PROF. LYON.

This School has at present a course of two years, embracing the analysis and history of the language; Rhetoric, Theoretical and Practical; Logic; English Literature, with critical examination of authors; the Elements of Criticism and Elocution, consisting of practical drill in the elements, cultivation of the voice, reading and declamation.

JUNIOR YEAR.

Analysis and History of the English Language, Elements of Rhetoric, Logic, English Literature and Elocution.

SENIOR YEAR.

Rhetoric, English Literature, Elements of Criticism, and Elocution. Political Economy is also temporarily assigned to this school.

Text Books and References.

Analysis, Greene; Rhetoric, Hill, Campbell, Whately; Logic, Coppee; English Literature, Baldwin, Shaw, Tyler's, Morley; Elements of Criticism, Kames; Elocution, Kidd, Mitchell, Raymond.

Political Economy; Chapin's Wayland, Bowen, Perry, Roscher.

IV.—SCHOOL OF GEOLOGY AND NATURAL HISTORY.

PROF. WHITE.

This School includes Botany, Zoology, and Geology, and requires two years for the completion of the course.

First Year—During the first year Botany and Zoology will be studied, and instruction in each will be given thrice every week of the Winter and Spring Terms. In addition to a full

theoretical knowledge of these subjects, a stated amount of practical work in analyzing and classifying plants, and in dissecting and skeletonizing animals will be required during the Spring Term.

Text Books—Botany—Gray's School and Field Book, and Bessey's Structural Botany; Sach's for reference.

Zoology—Packard. For reference, the works of Darwin, Wallace, Mivart, and others.

Second Year—Geology will form the subject of study during this year, and instruction in it will be given three times a week. from the beginning of the Winter Term until the commencement (about the 1st of May) of the Senior vacation. During this vacation a four weeks' excursion will be made through West Virginia and adjoining States, for the purpose of acquiring a knowledge of Practical Geology, the tracing and identification of minerals, the construction of sections, etc. This excursion (the necessary expenses of which never exceed fifty dollars), is open to all who pursue the study of Geology, but is required only of those who expect to graduate in the Scientific Department of the University, or to obtain the diploma of this School.

Text Book—Leconte's Elements of Geology. For reference, Dana's Manual, Lyell's Principles, and Geike's Text Book.

V.—SCHOOL OF MATHEMATICS.

PROF. PURINTON.

The School of Mathematics includes studies in Pure and Applied Mathematics, as follows: Algebra, Geometry, Trigonometry (Plane and Spherical), Mensuration, Surveying, Navigation, Analytical Geometry, Differential and Integral Calculus, Mechanics and Astronomy.

The course of instruction consists of three years:

Junior Year: Algebra, Geometry, Trigonometry.

Intermediate Year: Mensuration, Surveying, Navigation, Analytical Geometry, Calculus.

Senior Year: Analytical Mechanics, Astronomy.

Instruction is given by means of lectures, class exercises, and original work by the student. Original problems and

practical exercises are required in Trigonometry, Mensuration, Surveying, Topography and Astronomy.

Such useful instruments as the Compass, Transit, Sextant and Telescope are placed in the hands of the student and ample opportunity is given for becoming acquainted with their proper manipulation and their practical use.

Students are expected to have a good knowledge of Arithmetic, Elementary Algebra, and the first four books of Geometry, before entering this School.

VI—SCHOOL OF AGRICULTURE, PHYSICS AND GENERAL AND APPLIED CHEMISTRY.

PROF. LATHAM.

Instruction in the several departments of this School is by text-books and lectures. Examinations are in writing.

In *Agriculture* the University authorities have made no provision for practical teaching, and the instructor aims at no more than an exposition of some of the underlying chemical and physiological principles.

In *Physics*, as a necessary preparation for after study, attention is called to a few of the elementary principles of analytical mechanics (the full discussion of which belongs to the School of Mathematics), and experimental mechanics is taught as far as the limited supply of mechanical apparatus permits. Afterwards the subjects of Heat, Light, Electricity and Sound are discussed as fully as may be, and the modern doctrines of Molecular Physics are explained.

In *General Chemistry* the subjects presented are the distinctive features of chemistry, the laws of chemical combination, the origin, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course incidental allusion is made to the application of chemistry in medicine, pharmacy and the arts and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account.

In *Applied Chemistry*, which is, of course, only for those who have already acquired a competent knowledge of General Chemistry, such subjects are discussed as *dyeing, sugar-making, iron-smelting, the making of vinegar, bread making, cooking, the manufacture of soap, the preparation of fertilizers, the purification of illuminating gas, the extraction of salt from brine, the manufacture of pottery and glass, beer-making and the making of other beverages, the distinctions between pure and counterfeited butter and milk, leather tanning, and the utilization of waste products.* Experimental illustrations are given, as far as possible, and *practical pharmacy* is taught, as is also the analytical examination of *ores, fertilizers, soils* and *waters.*

To medical students who have sufficient preliminary information to enable them to appreciate it, a separate course of instruction will be given as to *the examination of medicinal chemicals*, the principles *of chemical incompatibility*, and *the search for poisons.*

VII—SCHOOLS OF METAPHYSICS AND HISTORY.

PROF. WILLEY.

I. The course of study in Metaphysics embraces Psychology, Ethics, and Evidences of Christianity.

The method of teaching is by text-book, familiar lectures and parallel readings. Where there are conflicting theories the attempt is made to acquaint the student with the arguments for and against, and to encourage to personal investigation and independent judgment.

Psychology—The text-books and books of reference used in this department are Porter's Intellectual Science, Bains' Body and Mind, Hopkins' Outline Study of Man, and the works of other leading authors.

Ethics—The several theories of morals are studied and discussed. The text-book is Wayland; with reference to Calderwood, Hopkins, Mill and others.

Evidences of Christianity—Prof. Paul Janet's Final Causes, Paley's Evidences and Natural Theology, Butler's Analogy, and works upon the historical evidences of Christianity are employed in this department.

II. The course of instruction in History is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect and thus to discover not only the facts, but the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study begins with THE OUTLINES OF ANCIENT HISTORY—text-book, Myres. This is followed by special histories, such as Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays—first and third series—Arnold's Lectures on Modern History, Ridpath's History of the United States, Constitutional History of the United States, and Schlegel's Philosophy of History.

PROFESSIONAL SCHOOLS.

I—SCHOOL OF LAW AND EQUITY.

PROFESSOR BROOKE.

The full course will embrace Common and Statute Law, Mercantile Law, Equity, Evidence, and Constitutional and International Law.

The Text-Books used in the course of Common and Statute Law will be Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, and for *reference* the Code of West Virginia, and the subsequent Acts of the West Virginia Legislature.

In the branch of Equity, Evidence and Mercantile Law, the books will be Adams Equity, the first Volume of Greenleaf on Evidence, and Smith's Mercantile Law.

These Text-Books will be supplemented by lectures each week, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The Text-Book used in Constitutional Law will be the "Foederalist." This, however, will be supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions will also be the subject of lectures.

The Text-Book used in International Law will be Woolsey's Introduction to the Study of International Law. Each day before the lecture, there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the Text Book as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing. The decree of Bachelor of Laws will be conferred upon graduates of this School.

II—SCHOOL OF ANATOMY, PHYSIOLOGY AND HYGIENE.

Prof. Allen.

This department has been laboring under certain difficulties since its establishment, which are now being rapidly overcome. The foundation has been laid and in a few years a museum will be formed of which the State may be proud. During this year this class has been retarded, as were others, to a slight extent.

The aim is to teach Anatomy thoroughly, practically, as well as can be done anywhere. Subjects are provided for dissection for the students.

Physiology and Hygiene are taught, as is Anatomy when practicable, by specimens, the microscope, drawings, lectures,

models, etc. The examinations are conducted in writing at the close of the session. Daily examinations, which are oral, are held throughout the term. Text Books are Gray's Anatomy, Wilson's Anatomy—Carpenter, Flint, or Dalton's Physiology —and for the present McSherry, Wilson, &c., in Hygiene.

Members of the class who give evidence at the final examination of successful study will receive CERTIFICATES OF PROFICIENCY in the branches taught.

Diplomas and Certificates.

I. A Certificate of Promotion will be given to each student who attains a standing of 7.5 on a scale of 10 for one year's continuous study in junior or intermediate classes.

II. A Certificate of Proficency will be awarded for satisfactory attainments in the entire studies of any School, or completed subject therein.

III. A Diploma will be conferred on each student who attains a standing of 7.5 on a scale of 10 during the entire course in any one of the following subjects: Latin, Greek, French, German, Chemistry, Physics, Geology Natural History, Analytical Chemistry.

IV. A Diploma will be granted to each student who completes the entire course in any Academic School with a standing of 7.5 on a scale of 10 in the senior class or classes thereof.

Students attaining a standing of 6. are allowed to pass from a lower to a higher class.

Degrees.

The University degrees are the following:

Bachelor of Science, B. S.

Master of Science, M. S.

Bachelor of Arts, A. B.

Master of Arts, A. M.

Bachelor of Laws, B. L.

The degree of Bachelor of Sciences requires: Diplomas in the Schools of Metaphysics, Modern Languages, English Geology and Natural History, Agriculture, General Chemistry and Physics, Mathematics.

Latin or Greek may take the place of one of the Modern Languages; History or Constitutional and International Law the place of senior English.

The degree of Master of Science requires: DIPLOMAS in the Schools of Metaphysics and History; Modern Languages; English; Geology and Natural History; Agriculture General, and Analytical Chemistry, and Physics; Mathematics; and CERTIFICATES OF PROFICIENCY in Anatomy, Physiology, and Hygiene.

The degree of Bachelor of Arts requires: DIPLOMAS in the Schools of Metaphysics, Ancient Languages. English History, and DIPLOMAS in Geology or Natural History, Genera-Chemistry or Physics, CERTIFICATE OF PROMOTION in Intermel diate Mathematics.

Chemistry or Physics may take the place of History.

CERTIFICATE OF PROMOTION in a Modern Language may take the place of senior Latin or senior Greek.

The Degree of Master of Arts requires DIPLOMAS from all the Academic Schools, also CERTIFICATES OF PROFICIENCY in Constitutional and International Law, and Physiology. A satisfactory general examination on all subjects studied will be required of students for this degree.

Candidates for any of the foregoing degrees must submit to the Faculty a suitable essay or oration to be delivered on Commencement day, if required.

The degree of Bachelor of Laws is conferred on graduates of the School of Law and Equity.

MILITARY DEPARTMENT.

MAJOR LEE.

Under the law of the State, five cadets may be appointed from each Senatorial District by the Regent for said district, who receive tuition, books (except dictionaries) and stationery free, but not more than three can be appointed from any one county, and books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them, undoubted evidence of fair moral character.

The following table will show the counties composing the several districts; the names of the Regents for each district are prefixed to this catalogue:

District I.	Hancock, Brooke, Ohio.
District II.	Marshall, Wetzel, Marion.
District III.	Ritchie, Doddridge, Harrison, Gilmer, Calhoun.
District IV.	Tyler, Pleasants, Wood, Wirt.
District V.	Mason, Jackson, Roane.
District VI.	Putnam, Cabell, Wayne.
District VII.	Lincoln, Boone, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII.	Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX.	Kanawha, Clay, Nicholas, Braxton, Webster.
District X.	Lewis, Randolph, Upshur, Barbour, Taylor, Tucker.
District XI.	Preston, Monongalia.
District XII.	Hampshire, Hardy, Grant, Mineral, Pendleton.
District XIII.	Berkeley, Jefferson, Morgan.

Besides the State Cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All Cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause. Drill occupies one hour on each of four days in the week. A neat uniform of cadet grey is worn, including a fatigue suit, which may be worn constantly, and is more economical than ordinary citizens' dress. Cadets may keep this in view in bringing clothes with them. Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term. The University has an ample equipment for both infantry and artillery, and is supplied with ammunition by the State.

In addition to the daily drills as Infantry or Artillery, the Cadets are theoretically instructed in Military Science, as follows:

FIRST YEAR.

First Term—Infantry tactics (Reed's); School of the Soldier; School of the Company.

Second Term—Instruction for Skirmishers; Battalion Drill.

Third Term—Military Signaling—(Meyer's).

SECOND YEAR.

FIRST TERM—Infantry tactics (Reed's); Ceremonies, Honors and Guard Duty.
SECOND TERM—Military History.
THIRD TERM—Artillery tactics (Reed's).

THIRD YEAR.

FSTIR TERM—Artillery tactics (concluded).
SECOND TERM—Military Engineering (Mahan's); Field Fortifications (Mahan's).
THIRD TERM—Advance Guard and Outpost Duty—(Mahan's).

FOURTH YEAR.

FIRST TERM—
SECOND TERM—Ordnance and Gunnery—(Benton's).
THIRD TERM—Military Law and Courts Martial—Benit's.

The above course is seldom taken in full, but officers of the corps are required to study and undergo examination upon Military Engineering, Field Fortification, Advance Guard and Outpost Duty, and Military Law and Courts Martial.

The annual course in drill for the entire Corps is as follows:

FIRST TERM—Schools of the Soldier, Company and Battalion, including Bayonet Exercises, Skirmish Drill and Target Practice.
SECOND TERM—Artillery—Manuel of the Piece and Sabre Exercise.
THIRD TERM—Artillery—School of the Battery Dismounted; Guard Duty; Courts Martial.

Dress Parades, Reviews, Inspections, and Guard Mountings, are held at least once a week.

The other studies in this Department are those of the Classical or the Scientific Departments respectively.

SCHEDULE OF CLASSES AND HOURS.*

	9—10 A. M.	10—11 A. M.	11—12 M.	2—3½ P. M.	3½—5 P. M.
MONDAY.	Sen. English. Jun. Math. Sen. Greek. Botany.	Sen. Latin. Jun. French. Int. Math. History. Geology.	Jun. Greek. Jun. English. Sen. German.	Metaphysics. Medicine. Sen. Nat. History.	Chem. Law.
TUESDAY.	Sen. English. Jun. Math. Int. Latin. Botany.	Jun. Latin. Sen. French. Sen. Math. History. Zoology.	Int. Greek. Jun. German. Jun. English. Geology.	Metaphysics. Medicine. Jun. Nat. Hist.	Physics. Law.
WEDNESDAY.	Sen. English. Jun. Math. Sen. Greek. Botany.	Sen. Latin. Jun. French. Int. Math. History. Geology.	Jun. Greek. Sen. German. Jun. German.	Metaphysics. Medicine. Sen. Nat. Hist.	Chem. Law.
THURSDAY.	Sen. English. Jun. Math. Int. Latin. Botany.	Jun. Latin. Sen. French. Sen. Math. History. Zoology.	Int. Greek. Jun. German. Jun. English. Geology.	Metaphysics. Medicine. Jun. Nat. Hist.	Physics. Law.
FRIDAY.	Sen. English. Jun. Math. Sen. Greek. Botany.	Sen. Latin. Jun. French. Int. Math. History. Geology.	Jun. Greek. Sen. German. Jun. English.	Metaphysics. Medicine. Sen. Nat. History	Chem. Law.
SATURDAY.		Jun. Latin. History. Sen. French. Zoology.	Jun. German. Jun. English. Geology.	Metaphysics. Medicine. Jun. Nat. Hist.	Physics. Law.

*Changes will be made in this schedule from time to time, when necessary, to remove, as far as possible, any serious conflict.

PREPARATORY DEPARTMENT.

PROF. LORENTZ.

JUNIOR YEAR.

FIRST TERM.

Geography—Guyot's Common School; Map Drawing.
Arithmetic—Stoddard's Complete and Stoddard's Mental.
English Grammar—(Swinton) Etymology.
Latin (commenced).

SECOND TERM.

Geography—Guyot's (continued); Map Drawing.
Arithmetic (continued).
English Grammar—Syntax and English Composition.
Latin—Grammar and Reader. Chase and Stuart.

THIRD TERM.

Arithmetic (completed).
English Grammar—Analysis, Prosody and English Composition.
Latin—Grammar and Readers.
Greek—First Book (Harkness.)

SENIOR YEAR.

FIRST TERM.

Algebra—Robinson's Elementary, to Involution.
Book-keeping (Bryant and Stratton) Single-Entry.
Cæsar (two books)—Latin Grammar.
Greek—Grammar and Reader. (Goodwin).

SECOND TERM.

Algebra—Robinson's Elementary (completed).
Book-keeping. Double Entry.

Cicero's Orations (three orations)—Chase and Stuart's Latin Grammar.
Greek—Grammar and Reader.

THIRD TERM.

Geometry—Robinson's (first four books).
History of the United States (completed).
Virgil—Three Books of Æneid; Latin Grammar.
Xenophon's Anabasis (two books). Greek Grammar.
Regular Lessons in English Composition from beginning.

The studies preparatory to the Agricultural Department are as follows:

FIRST TERM—Algebra; Arithmetic; Grammar; Geography.
SECOND TERM—Algebra; Arithmetic; Grammar; History U. S.
THIRD TERM—Geometry; Arithmetic; Grammar; History U. S.

SCHEDULE OF DAILY RECITATIONS.*

PREPARATORY DEPARTMENT.

FIRST TERM.

YEAR.	FIRST HOUR.	SECOND HOUR.	THIRD HOUR.	FOURTH HOUR.
Senior Year	Algebra.	Greek Reader.	Cæsar.	Book-keeping.
Junior Year		English Grammar.	Latin Lessons.	Arithmetic.

SECOND TERM.

Senior Year	Algebra.	Cicero.	Greek Reader.	Book-keeping.
Junior Year		Latin Reader. Latin Reader.	Arithmetic.	English Grammar.

THIRD TERM.

Senior Year		Anabasis.	Virgil.	Geometry.
Junior Year	Arithmetic.	Greek Lessons.	Latin Reader.	English Grammar.

*Subject to variation.

Military Department.

JAS. McM. LEE, A. M.,

Major and Commandant.

ROSTER OF CADETS AND OFFICERS.

BATTALION STAFF.

CADET R. ARMSTRONG.....First Lieutenant and Adjutant.
CADET R. A. ARMSTRONG.....Ordnance Sergeant.

COLOR GUARD.

CADET R. A. ARMSTRONG.....Sergeant.
CADET R. S. GARDNER.....Corporal.
CADET GEO. P. ROBINSON.....Corporal.
CADET J. E. CHARLES.....Corporal.

COMPANY OFFICERS.

COMPANY "A."

CADET H. FLEMING.....Captain.
CADET R. W. TAPP.....First Lieutenant.
CADET W. H. MICHAEL.....Second Lieutenant.

NON-COMMISSIONED OFFICERS.

CADET GEO. E. BOYD, JR.....First Sergeant.
CADET N. D. ADAMS.....Second Sergeant.
CADET GEO. N. SHUGERT.....Third Sergeant.
CADET B. C. WILSON.....Corporal.
CADET R. F. BIRKETT.....Corporal.

COMPANY "B."

CADET J. D. SWEENEY.....Captain.
CADET H. L. ROBINSON.....First Lieutenant.
CADET W. S. STUART.....Second Lieutenant.

NON-COMMISSIONED OFFICERS.

CADET E. W. LAWSON.....First Sergeant.
CADET AUG. RUFFNER.....Second Sergeant.
CADET F. M. THOMAS.....Third Sergeant.
CADET I. S. COX..... .....Corporal.
CADET G. W. SISLER.....Corporal.

DRUM CORPS.

CADET A. J. JENNINGS.....Drum Major and Trumpeter.
CADET F. M. THOMAS .....Sergeant and Trumpeter.
CADET GEO. P. ROBINSON.....Corp. and 1st Tenor Drummer.
CADET J. E. LAZZELL.....Second Tenor Drummer.
CADET H. R. ALEXANDER.....Bass Drummer.

ROSTER OF STATE CADETS.

No. of District.	Name.	County.	Enlisted.	Status.	Discharged.
I.	Adams N. D	Tucker	Mar. 8, 1881	Present	
	Hughes, M. S	Ohio	Apr. 28, 1882	Discharged	Oct. 27, 1883
	Birkett, R. F	Ohio	Sept. 5, 1883	Present	
	Sisler, G. W	Monongalia	Sept. 19, 1883	Present	
	Marshall, J. O	Hancock	Apr. 15, 1884	Present	
	One vacancy				
II.	Lawson, E. W	Taylor	Sept. 12, 1881	Present	
	Cox, I. S	Marion	Mar. 21, 1882	Present	
	Cox, J. D	Marion	May 5, 1883	Present	
	Yost, L. H	Marion	Sept. 10, 1883	Present	
	Robinson, J. T	Brooke	Sept. 14, 1883	Discharged	Nov. 9, 1883
	Yost, Z. F	Marion	Sept. 20, 1881	Discharged	Dec. 4, 1883
	Vacancy				
III.	Fleming, H	Ritchie	Mar. 31, 1880	Present	
	Gardner, R. S	Harrison	Mar. 13, 1883	Present	
	Romine, A. L	Harrison	Sept. 27, 1883	Present	
	Two vacancies				
IV.	Sweeney, J. D	Tyler	Mar. 31, 1880	Present	
	Stuart, W. S	Doddridge	Sept. 7, 1881	Present	
	Grumbine, C. F	Wood	Sept. 5, 1883	Discharged	Dec. 4, 1883
	Rector, E	Wood	Sept. 5, 1883	Discharged	Apr. 10, 1884
	Two vacancies				
V.	Charles, J. E	Mason	Sept. 5, 1883	Present	
	Stribling, G. W	Mason	Sept. 5, 1883	Discharged	Oct. 9, 1883
	Jennings, A. J	Jackson	Sept. 5 1883	Present	
	English, L. S	Mason	Mar. 19, 1884	Present	
	Two vacancies				
VI.	Armstrong, R	Putnam	Apr. 11, 1879	Present	
	Alexander, W. A	Putnam	Oct. 1, 1882	Discharged	Jan. 4, 1884
	Stark, E. B	Putnam	Sept. 7, 1883	Present	
	Three vacancies				
VII.	Chamberlin, E. V	Kanawha Wyoming*	Sept. 5, 1883	Discharged	Dec. 8, 1883
	Robinson, G. P	Kanawha Logan*	Sept. 5, 1883	Present	
	Alexander, H. R	Putnam Boone*	Sept. 5, 1883	Present	
	Couch, L. W	Mason	Sept. 5, 1883	Present	
	Two vacancies				
VIII.	Lively, F	Summers	Sept. 6, 1883	Present	
	Rector, J. C	Wood	Sept. 17, 1883	Present	
	Hodge, A. A	Monroe	Sept. 27, 1883	Present	
	Robinson, H. L†	Monongalia	Oct. 15, 1883	Present	
	Two vacancies				
IX.	Laidley, P. W	Kanawha	Sept. 5, 1883	Discharged	Apr. 4, 1884
	Rader, E. H	Nicholas	Sept. 5, 1883	Discharged	Apr. 22, 1884
	Grady, C. P	Kanawha Clay*	Sept. 5, 1883	Present	
	Wilson, B. C	Kanawha	Sept. 5, 1883	Present	
	Ruffner, Aug	Kanawha	Sept. 5, 1883	Present	

ROSTER OF STATE CADETS—CONTINUED.

No. of District.	Names.	County.	Enlisted.	Status.	Discharged.
X.	Armstrong, R. A.	Upshur	Mar. 8, 1882	Present	
	Alkire. W. S.	Lewis	Sept. 17, 1883	Discharged	Jan. 22, 1884
	Helmick, M. D.	Lewis	Sept. 22, 1883	Present	
	Newlon, J. A.	Upshur	Oct. 3, 1883	Discharged	Mar. 11, 1884
	Carper, W. B.	Upshur	Oct. 23, 1883	Present	
	Two vacancies				
XI.	Tapp, R. W.	Monongalia	Mar. 31, 1880	Present	
	Michael, W. H.†	Preston	Nov. 4, 1881	Present	
	Lazzell, J. E.	Monongalia	Sept. 5, 1883	Present	
	Jemison, D. L.	Mon'ng'lia Preston*	Sept. 5, 1883	Present	
	White, W. J.	Monongalia	Sept. 14, 1883	Present	
XII.	Workman, R.	Mineral	Sept. 6, 1882	Present	
	Rhodes, W. E.	Lewis	Mar. 14, 1883	Present	
	Three vacancies				
XIII.	Shugert, G. N.	Jefferson	Nov. 1, 1882	Present	
	Strode, E. L.	Berkeley	Sept. 6, 1883	Present	
	Shepherd, T. R.	Jefferson	Sept. 5, 1883	Present	
	Thomas, F. M.	Preston	Mar. 3, 1882	Present	
	One vacancy				

†Graduates in June, 1884.
*County to which accredited.
NOTE.—No distinction is made between "Discharged" and "Honorably Discharged" in this Roster.

VOLUNTEER CADETS.

NAMES.	POSTOFFICE.	ENLISTED.	STATUS.	TRANSFER'D OR DISCHARG'D.
Robinson, H. L.....	Morgantown, W. Va.	Sept. 1, 1880...	Ap'd Regular.....	Oct. 25, 1883..
Alkire, W. S.....	Jane Lew, W. Va.....	Sept. 7, 1881...	Ap'd Regular.....	Oct. 20, 1883..
Swan, Leroy.....	Mid'lbourne, W. Va.	Sept. 10, 1883..	Present.....	.....
Boyd, G. E.....	Wheeling, W. Va.....	Sept. 20, 1882..	Present.....	.....
Leach, J. E.....	Parkersburg, W. Va.	Sept. 19, 1883.	Discharged.....	Feb. 19, 1884

DISTINGUISHED CADETS, 1882-83.

Name.	Military.	Course.
Armstrong, R.	Military...	
Armstrong, R. A.		Academic.
Baker, G. C.	Military...	
Bennett, C. S.	Military...	
Birkett, J. A.	Military...	Academic.
Bland, W. T.	Military...	
Brown, B.	Military...	
Cooper, C. N.	Military...	
Elliott, E. C.	Military...	
Fleming, H.	Military...	
Hayes, S. A.	Military...	
Lawson, E. W.	Military...	
Lazzell, I. G.	Military...	
Michael, W. H.	Military...	
Musgrave, J. E.	Military...	
O'Brien, D. A.	Military...	
Robinson, H. L.	Military...	
Stuart, W. S.	Military...	
Sweeney, J. D.	Military...	
Tapp, R. W.	Military...	
Wells, S. P.	Military...	
Yokum, H.	Military...	

*Those attaining a standing of nine on a scale ten, for the entire year, are entered as "distinguished."

General Remarks.

LOCATION.

The West Virginia University is located at Morgantown. Its buildings are ample, eligibly situated, and admirably adapted for their purposes. They are immediately outside of the borough, on the right bank of the Monongahela river, and command a wide prospect of exceedingly attractive and picturesque scenery. Morgantown can be reached daily by coaches from Fairmont on the Baltimore and Ohio railroad, and from Uniontown, Pennsylvania. Steamboats from Pittsburgh arrive every day at Geneva, twelve miles below Morgantown, and, under appropriations from Congress, the slack-water navigation of the river will soon extend to Morgantown. Two railroads from Fairmont to Morgantown are now in process of construction, and in a few months railway communication will be open to the University.

ORIGIN.

The University is the outgrowth of the "West Virginia Agricultural College," established in 1867, with the proceeds of the State's share of the land, granted by Congress in aid of agricultural and industrial education in the States. This fund, increased by subsequent appropriations by the State, now amounts to about $110,000, and constitutes the permanent endowment of the institution. There are annual appropriations for current and contingent expenses. The citizens of Morgantown, with generous appreciation of educational advantages, contributed in grounds, buildings and money about $50,000.

SCOPE AND WORK.

The scope of the University and the work which it is accomplishing will be best understood from the statements of the several Schools, already set forth.

The Law School is now fully organized, and those who complete its courses hereafter will receive the regular degree. There is as yet no full Medical Department, but as the beginning of such a department the Regents have established a Chair of Anatomy, Physiology and Hygiene, and it is believed that in the studies of this School, with its ample practice in the dissecting room, and of the Schools of Chemistry and Botany, unsurpassed opportunities are offered for the preliminary instruction of medical students.

THE PREPARATORY.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. This department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity of this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of Collegiate Study proper, or shutting out from the advantages of the Institution many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or, if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

During the spring term of each year, (beginning on the second Wednesday in March,) unusual facilities are provided for all who may desire to take a short and limited course, or to fit themselves for teaching, or other specialties All needed assistance in the work being rendered by the several professors of the University, superior advantages are afforded to all comers.

REQUISITES FOR ADMISSION.

I. All candidates for admission to any School of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must produce certificates of honorable dismission from the same.

III. No student will be graduated in any School of the University who is deficient in English elementary studies.

IV. Candidates should procue a copy of the printed laws of the University, also the Treasurer's receipt for tuition before presenting themselves for enrollment.

V. Applicants for admission to the Preparatory Department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic, through common fractions.

VI. Students are required to pronounce Greek and Latin according to the so-called Continental Method.

EXAMINATIONS.

Examinations are held at such times as each professor may deem necessary, in his School, and at the close of each session.

No student shall be excused for non-attendance, except upon presentation of a reason which may be considered valid by the Faculty.

In ascertaining a student's standing, the examination marks shall count one-half and the recitation marks one-half, and the time allowed for each examination shall be not less than two hours and may be as much more as the Professor in charge shall deem sufficient.

Students who have not before been at the University should, on their arrival, report themselves to the chairman of the Faculty, and by him be assigned to such Schools as they may desire and be prepared to enter.

TUITION.

TUITION IN THE PREPARATORY DEPARTMENT, -	$5 00	per term.
" OTHER DEPRATMENTS, - - - -	8 00	"
CONTINGENT FEE IN ALL DEPARTMENTS, - -	2 00	"

Students in analytical Chemistry will be charged a fee of $20 per session to cover the use of material and wear and tear of apparatus in their hands.

There will be no variations nor deductions from these rates for any cause whatever, except in the case of protracted illness.

Ministerial students are admitted free.

BOARDING AND EXPENSES.

Steps have been taken by the Board of Regents looking to the establishment of a large Dormitory on the University grounds, where the whole body of students can be comfortably and appropriately domiciled and supervised.

Three methods of boarding are practiced: (1.) Self-boarding, by individuals, or, more commonly, by small groups or colonies composed of members of the same family, or of neighboring families. Rooms are hired, and furniture, provisions and fuel are brought from home. When well managed, this is an excellent and very economical mode of living. From $1.00 to $1.50 a week per pupil may be set down as the cost. (2) Club boarding. This has been practiced for some time and is an excellent system. A company of young men rent a number of rooms or an entire house and then organize and operate a boarding club. The price of boarding in clubs varies from $1.75 to $2.75 per week, including rent of room. (3) Boarding in families. The difficulties formerly encountered in procuring suitable places for students desiring to board in families have disappeared. Good boarding can be found at reasonable prices ranging from $2.50 to $3.50.

Incidental expenses depend on the habits of the student. The law prohibits students incurring debts at stores, groceries, etc., except on written order of parents, guardian or teacher. Unnecessary and lavish expenditures induce not only waste of time and means, but neglect of study and formation of bad habits.

PRIZES.

The Regents' Prizes—To the student who shall write the best essay upon a given subject, $25.00. To the student who shall be adjudged the best declaimer, $15.00. These prizes to be awarded after public competition, by a committee of citizens appointed by the Faculty.

These were awarded at the last contest as follows:

Essay—M. L. Hughes, - - - -	$25.00
Declamation—Geo. E. Boyd, Jr., - - -	15.00

A prize of $25.00 has also been offered for the current year, by the Chaplain and Faculty, to that member of the Young

Men's Christain Association, who shall write the best essay on the subject: "John Bunyan, his life and writings."

SUGGESTIONS.

It is unwise for young men to come to the University with the expectation of taking one or another of the University courses without a fair so-called English education, and habits acquired of earnest, vigorous study. Preliminary training must be had in the lower schools, and both instructor and pupils in the University would be saved numberless embarrassments and disappointmenrs if this matter were properly understood by the public. The success and usefulness of a university do and must depend on the character of the instruction given thereat. In no sense can its usefulness or its genuine success be measured by the number of students in attendance on its classes; and the instructors in the various departments have heretofore suffered the greatest annoyance and observed the most depressing effect on some students, resulting from the circumstance that they have entered his classes without even a sufficient knowledge of the English language to enable them to understand the instruction given. The attendance of such students on the University classes either confers no benefit on themselves or else results in a keeping down of the grade of teaching, and imposes on the State the necessity to pay extravagantly in Morgantown for the sort of instruction already provided for throughout the State on better terms.

DISCIPLINE.

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept in which are entered the grade of scholarship of each student, and his absence from exercises. A report is sent at the close of each month to parents or guardians, so that they may see how their sons and wards are studying and how they stand in scholarship and deportment. In case of negligence, irregularity or other misconduct, the students will be privately admonished and the parents or guardians will be informed of the fact. Mere inattention to study will, if persisted in, insure

dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is especially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his classmates that he be punctual in his place from the first day of the term till the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with those duties.

RELIGIOUS INSTRUCTION AND WORSHIP.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all the students are expected to be present. They are also expected, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

The Young Men's Christian Association has been reorganized and is in successful operation. Regular meetings are held, and a good deal of interest is manifested.

LIBRARY.

A respectable beginning towards a University Library has been made. About five thousand volumes have been carefully selected and placed on its shelves, including, not only many choice and valuable books of reference, but also standard works in the various departments of History, Biography, Theology, Agriculture, Arts, Science and General Literature.

We respectfully request the friends of education to make contributions to its shelves.

READING ROOM.

Nearly all the journals of the State and valuable religious papers of all leading religious denominations are gratuitously sent to the reading room of the University.

MUSEUM.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens in other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labeled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The vicinity of the University offers unrivaled advantages for the study of Practical Geology. Especial attention is paid to this branch.

Additional provision has recently been made for the study of Practical Geology by means of an annual excursion of four weeks with Prof. White through portions of West Virginia and of surrounding States.

DONATIONS TO THE MUSEUM.

R. S. Gardner—Fossil Shells, Coral, Unios, Seeds, &c.
J. C. Sheener—Birds' Eggs.
A. G. Lee—Snake Eggs.
James M. Lee—Chain Snake.
Henry Cooper—Copperhead Snake.
Geo. E. Boyd—Green Snake.
J. A. Kirkhart—Garter Snake.
G. W. Freeman—Raw Silk and Silk Moth.
W. T. Willey—Old Money.
S. C. Stewart—Humming Bird's Nest.
Duncan McRay—Calomites and Fossil Shells.
L. J. Holland—Horned Owl.
D. L. L. Yost—Fossils from Ohio.
Rev. D. G. Helmick—Fossils from Harrison Co., W. Va.
W. F. Anderson—Vertebrate Skeletons.

Harry L. Robinson—Vertebrate Skeletons.
C. L. Eakin—Vertebrate Skeletons.
James W. Hartigon—Vertebrate Skeletons and King Crab.
John L. McCutcheon—Vertebrate Skeletons.
Dan. U. O'Brien—Insects.
G. W. Moredock—Indian Remains.

LITERARY SOCIETIES.

There are two of these, (the Parthenon and Columbian,) in connection with the University, supplied with suitable halls, tastily furnished, whose exercises in Composition, Reading, Orations, Debate and Criticism are, in many respects, of great advantage to the student. They also afford facilities for the study of and acquaintance with Parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries.

Appendix.

NOTES ON THE GEOLOGY OF WEST VIRGINIA.

WRITTEN FOR THE VIRGINIAS BY PROF. I. C. WHITE.

The annual four weeks' geological excursion from the West Virginia University was taken by the following students of the senior class: William T. Bland, Weston, Lewis County; L. M. Boyers, Randall, Monongalia County; Benj. Brown, Charleston, Kanawha County; S. B. Brown, Gladesville, Preston County; Walter Hough, Morgantown; John L. Johnston, Pentress, Monongalia County; J. G. Lazzell, Maidsville, Monongalia County; S. P. Wells, jr., Parkersburg, Wood County, and Clement L. Eakin, Wadestown, Monongalia County; James W. Hartigan, Piedmont, Mineral County, special students in geology.

The route chosen was as follows: From Wheeling we passed down the Ohio River in a row-boat for 200 miles to Point Pleasant, at the mouth of the Great Kanawha; thence by steamer to Cincinnati and returned to the Great Kanawha Valley, where several days were spent in studying the Kanawha and New River coals; from the New River country we took the Chesapeake & Ohio Railway to Clifton Forge, and thence down the James River over the R. & A. Railroad,

stopping at the Natural Bridge, Balcony Falls and Richmond. From the latter place a two days' excursion was made to Newport News and Fortress Monroe. Returning to Waynesboro, we passed over the Shenandoah Valley Railroad, stopping at Luray Cave, and thence home to the University over the B. & O. Railroad, reaching Morgantown May 30th, after an absence of 26 days.

The class and myself are under many obligations to Major Hotchkiss, of *The Virginias*; General Manager C. W. Smith, of the C. & O. Railway; Vice-president Axtell, of the R. & A. Railroad; General Passenger Agent Pope, of the Shenandoah Valley Railroad; the officers of the Ohio Central, State Auditor Miller, of Wheeling, and to Captain Tompkins, of the steamer Virgie Lee, for favors in getting and granting passes and reduced rates of transportation.

We are also indebted to the Hon. S. P. Wells, of Parkersburg; Dr. James Stewart, of Raymond City; Judge Brown and sons and G. W. Craig, of Charleston; Mr. Robert Hutchinson, of Point Pleasant; Mr. G. W. Moredock, of Hartford City, and to the Messrs. Valentine, of Richmond, for many kind favors.

Between Wheeling and Point Pleasant a special study of the Ohio River geology was made, with the view of learning the approximate position of the *Pittsburg coal*, with reference to the river level, after the former dips below the latter near Benwood. In this attempt to keep hold of the Pittsburg coal horizon we were in the main successful, and as this portion of the Ohio River is almost an unknown field to the geologist, owing to the rarity of Prof. Wm. B. Rogers' reports, the sections taken on our trip will be given in detail in this and future numbers of *The Virginias*.

NO. IV. THE PITTSBURG COAL AND ITS ASSOCIATED ROCKS FROM WHEELING SOUTHWARD ALONG THE OHIO RIVER.

The great Pittsburg coal bed, No. 8, of the Ohio Geological survey, is first caught in the Ohio River hills near Steubenville as we descend that stream from the northern line of West Virginia, and has long been mined there at an elevation of nearly 500 feet above the river. From this point, however, the coal dips southward at an average rate of 20 feet per mile, thus constantly approaching the level of the river, until at Wheeling, 20 miles below Steubenville, the coal is only 100–130 feet above the water. Followed southward from Wheeling this coal continues to approach the Ohio River, and about five miles south from that city it finally sinks below the water, and does not reappear again along that river until we come to the vicinity of Hartford City, 160 miles below Wheeling. What becomes of the Pittsburg coal under this wide intermediate area? Does it continue in an unbroken sheet between the two points, and if so, at what depth could it be reached by shafting at the various points? Or does the coal disappear over any considerable portion of this territory? These are questions that naturally arise to any one who

owns property along the Ohio River, or who realizes the immense importance of this Pittsburgh coal to any region where it can be mined with success. These questions and their answers will be considered in the course of the following pages. To do this systematically we shall begin with a study of the rocks in the hills at Wheeling, and by comparing them with those exposed at other localities down the Ohio River, may be able to throw some light on he questions proposed.

The following section, No. 1, exhibits the structure of the rocks as observed in descending Wheeling hill to the head of 10th street, and thence to the Ohio river:

1.	Concealed from summit of hill	30′	Interval from the Waynesburg coal to the Pittsburg. 250′
2.	*Coal blossom, Waynesburg*	2′-3′	
3.	Concealed and marly shales with several thin layers of limestone	55′	
4.	Light gray limestone, pure, filled with *minute univalve fossils*	2′	
5.	Yellow and greenish, sandy shales	10′	
6.	Shales, limestone and concealed	15′	
7.	Limestone, shaly at base	5′	
8.	Yellowish shales and concealed	10′	
9.	Impure limestone, gray below and buff at top	5′	
10.	Chocolate green shale	5′	
11.	Limestone interstratified with shale	30′	
12.	Limestone, pure at top but brecciated below	2′	
13.	Limestone interstratified with shales	30′	
14.	Shales, gray and dark, containing plant fragments	16′	
15.	Sandstone, greenish gray, micaceous	1′	
16.	Shale, drab	4′	
17.	Shaly sandstone	1′	
18.	Thinly laminated, sandy shales containing *Calamites*	5′	
19.	*Coaly shale, Redstone*	0′ 6″	
20.	Concealed	10′	
21.	Limestone, earthy, light gray	10′	
22.	Concealed	20′	
23.	Limestone, buffish	12′	
24.	Concealed, including *Pittsburg coal* near top	28′	
25.	Sandy shales	10′	
26.	Concealed to low water in Ohio river	100′	

A more complete section was obtained in descending Chapline hill to Wheeling creek, near the Crescent Rolling mill, as follows, (Sec. 2):

1.	Shaly sandstone and concealed from the summit of Chapline hill	35′		No. XVI. Permian. 233′
2.	Sandstone, rather massive	5′		
3.	Concealed	45′		
4.	Shales and impure limestone	10′		
5.	Sandstone, shaly and flagy	35′		
6.	*Coal, Washington*	2½′-3′		
7.	Concealed and sandy shales	60′	100′	
8.	Concealed	40′		
9.	*Coal Waynesburg*	2′		

10.	Concealed	5′		No. XV, or Upper (267½′) Coal Measures.
11.	Flagy sandstone filled with plant fragments	4′		
12.	Concealed	4′		
13.	Limestone, shales and concealed	60′	158′	
14.	Sandstone, massive, gray	5′		
15.	Limestone and concealed	20′		
16.	Green shale	5′		
17.	Limestone interstratified with shales	55′		
18.	*Coal Sewickley* — coal	1′0″	13′8″	
	sandy shales with plants	12′0′		
	coal			
19.	Shales	8′	29′	
20.	Sandstone, rather massive, micaceous, current-bedded	20′		
21.	Limestone, impure, flagy, filled with fossil ferns	1′		
22.	*Coal*, Redstone	0′10″		
23.	Limestone, mostly buffish and impure	55′		
24.	*Pittsburg coal* — coal, roof	2′	9′	
	shale	2′		
	coal, main bench	5′		
25.	Fireclay	5′		
26.	Sandy shales, gray	20′		
27.	Sandstone, massive, Lower Pittsburg	25′		
28.	Shales, gray, soft	10′		
29.	Concealed to low water in Ohio river	40′		

In making these sections as well as the others along the Ohio river, the measurements were made and carefully re-checked in every case with one of Hicks' best aneroids, so that the total can not differ more than 5–10 feet from the exact vertical heights; and in this connection it is interesting to note the almost complete agreement between section 2 and the one taken in the same locality by Messrs. Briggs and Townsend of the Rogers' survey, and recently published in *The Virginias*.

The identification of the Washington and Waynesburg coals made in these sections are based on the observations made further down the Ohio river, since neither is mined in the vicinity of Wheeling, and their thickness could only be estimated from the size of their "blossoms," or decomposed outcrops. As evidence for the correctness of the indentifications here given, however, it should he stated that both of these coals were traced southward until several hundred feet of the Permo-Carboniferous beds come into the hills above them, and that with the exception of a small *coal streak* at 245 feet above the uppermost coal bed (Washington), no coal whatever was found above the latter in the entire interval exposed, which was nearly 500 feet. Now as the Washington bed is one of the most persistent of the series in Monongalia and Marion counties and over all of southwestern Pennsylvania, it seemed improbable that it should totally disappear from the section, since in Washington county, not 20 miles from Wheeling, the same bed is 7–10 feet thick. Then too, this No. 6 of Section 2, is mined several miles below Wheeling, and was there found to possess a structure and quality exactly like the Washington coal, as exhibited in West Virginia and S. W. Pennsyl-

vania, so that putting all the evidence together, there seems to be every reason for believing that Prof. J. J. Stevenson was right, when he first of all identified the coals numbered 6 and 9 in Section 2, with the *Washington* and *Waynesburg*, respectively.

Of course these identifications involve the thining away of the 100 feet ofrocks from the interval between the Waynesburg and Pittsburg coals, and 75 feet from the interval between the Washington and Waynesburg beds, but the same writer (Stevenson) has shown that all the coal measures at intervals thin away rapidlyin passing westward into Ohio from the Monongahela river, so that the lessened intervals are no proof against these identifications. In Greene county, Pa., and Monongalia and Marion counties, W. Va., the interval from the Waynesburg coal to the Pittsburg is about 360 feet, while that from the Washington to the Waynesburg bed is 175, and by a strange coincidence the westward thinning of the intervals has removed exactly the latter amount (175′) of rock material from the section, thus leting the Washington coal down to the same vertical distance (360′) at which the Waynesburg bed is found above the Pittsburg coal along the Monongahela river. It is this singular coincidence that has thrown some doubt on the correctness of Stevenson's identification, but which, as already stated, seems now established beyond question.

It will be observed from Section 2 that the 100 feet of thinning between the Waynesburg and Pittsburg coals, has all taken place within the interval between the former bed and the Sewickley coal, since the vertical distance between the latter and the Pittsburg bed, viz: 90 feet, is practically the same as on the Monongahela river.

The Sewickley coal (No. 18, Sec. 2) is represented in the Wheeling section by two thin seams separated by 12 feet of sandy shales in which occur many beautiful specimens of *Annularia longifolia* and *Neuropteris flexuosa*. In Monongalia county the Sewickley bed is 5-6 feet in one bed, and one of the best grade coals in the State, but along the Ohio river the conditions seem to have been quite unstable during the epoch of this coal, so that rapid subsidence split it up into two and sometimes three beds, none of which are thick enough to be valuable.

The Redstone coal still holds its place in the series as No. 22 of Sec. 2, though only a streak 10 inches thick at 55 feet above the Pittsburg. In Monongalia county it is 4-5 feet thick, and 30-45 feet above the Pittsburg.

The sandstone so often found immediately above the Pittsburg coal is not present at Wheeling, its place being filled with buffish, impure limestones and limy shales which extend down to the very roof of the coal. These limestones have a *magnesian* look and some of the layers ought to make a good quality of hydraulic cement.

The Pittsburg coal, No 24 of Sec. 2, has very much the same structure that it presents at Pittsburg, Connellsville, Morgantown, Fair-

mont, Newburg, Clarksburg, Piedmont, Raymond City, and every other place where it is mined in West Virginia and western Pennsylvania. The roof coal is not taken out at Wheeling, and the main bench is not quite so thick as at the other localities named above.

The question as to what Wheeling will do for cheap fuel, when the available supply of Pittsburg coal is exhausted from her hills, is one that will interest the future capitalists of that city, and should certainly receive the thoughtful attention of those now living within her gates, for as may be seen from the sections given, there is no other workable coal above the water-level at Wheeling except the Pittsburg.

One way in which the period of cheap fuel may be greatly lengthened is by the discovery of Natural Gas by drilling in the vicinity of Wheeling. The rock which holds the great gas veins recently struck at Wellsburg and Brilliant, Ohio, would be found about 1,500 feet below the bed of the Ohio at Wheeling, and should it prove gas-bearing there, would for many years practically supercede the use of coal in manufacturing, and thus greatly lengthen the period of the latter's exhaustion. The wells now being sunk at the Central Glass Works, Martin's Ferry, and others soon to be drilled for gas within the limits of Wheeling, will soon decide the question as to whether or not gas in large quantities can be obtained in that vicinity. Should these fail, however, there are, unquestionably, large gas-bearing areas within 10–15 miles of Wheeling, in the direction of Wellsburg and Washington county, Pa., to which the Wheeling people could afford to lay pipes for the future cheap fuel, since Pittsburg capitalists are now laying pipes 25–30 miles for the same.

But however long the time may be prolonged, it will eventually come when Wheeling must look elsewhere for coal than to her own rugged hills. Where then shall we get it? She has the choice of two methods, viz: transportation from a distance or by shafting to the Lower Coal measures which underlie the city. The same coal that is so extensively mined by shafting below the bed of the Ohio at Steubenville and southward, should be found at about 450 feet below the bed of the river in the vicinity of Wheeling, since its place in the series is 575 feet below the Pittsburgh coal. In confirmation of this, the Central Glass Works gas-boring reports a bed of very pure coal 6 feet thick at a depth of 474 feet. When coal is wanted at Wheeling here is an almost inexhaustible supply that can certainly be obtained by shafting, and under this coal, at moderate depths, come two other beds which can be drawn upon when wanted, so that as far as cheap fuel is concerned no city in the country has a longer hold upon this main-spring of industrial life than Wheeling.

As we pass down the Ohio River southward from Wheeling, the Pittsburg coal gradually approaches the Ohio River, and finally, about one mile below Benwood, sinks beneath its bed, and the southward dip continuing, the coal is carried to nearly 100 feet below the

Ohio in the vicinity of Moundsville, where it is mined by shafting on the Ohio side of the river, and found at a depth of 90 feet. It is probably 10′–20′ deeper on the West Virginia side at Moundsville, since the dip is quite rapid to the east and south. The borings for gas and oil in the vicinity of Moundsville report the Pittsburg coal at a depth of 130′–140 feet, and another one 6-7 feet thick at 575 feet below the former. This last would of course be the Upper Freeport bed, or the same one that is shafted for at Steubenville.

Big Grave Creek puts into the Ohio River from West Virginia about one mile below Moundsville, and a short distance south from this stream a well was bored for oil on the land of "Colonel" J. H. Lockwood by Mr. L. Eisenbeis, who kindly gave me permission to transcribe the record from his note-book. The boring begins just back from the river bluff and about 30 feet above the level of the water.

A steep hill rises on the West Virginia side to a height of nearly 600 feet above the Ohio River, and in descending this from Mr. S. Riggs', on its summit, the following section, No. 3, was constructed with the oil well record:

1. Concealed from top of hill.....30′
2. Limestone in three layers interstratified with shale.....5′
3. Red and variegated shale.....45′
4. Yellowish sandy shales.....10′
5. Massive sandstone, yellowish brown.....5′
6. Red shale, marly at top, and containing *iron nodules* at 10′–15′ above the base.....45′
7. Sandstone.....2′
8. Concealed.....20′
9. Hard sandstone.....3′
10. Concealed.....10′
11. Red shale.....10′
12. Brown, sandy shales.....12′
13. Sandstone, rather massive.....8′
14. Drab shales, filled with fossil plants.....10′
15. Concealed.....10′
16. Limestone, impure, and concealed.....10′
17. Limestone, shaly.....5′
18. Concealed.....5′
19. Sandstone, hard, gray, micaceous..... 1′
20. Concealed.....3′
21. Gray limestone, rather pure.....10′
22. Concealed.....20′
23. *Coal, Washington*, blossom with shale in center.....10′
24. Shales and sandstone.....13′
25. Concealed.....40′
26. Limestone, rather pure, visible.....1′
27. Concealed.....15′
28. Flagy sandstone, micaceous.....6′
29. Greenish shale and shaly sandstone.....20′
30. Concealed.....8′
31. Limestone.....2′
32. Shale.....1′

33.	*Coal, Waynesburg*	coal, impure ..... 0′6″	3′
		shale ..... 1′0″	
		coal ..... 1′6″	
34.	Shale, soft, gray	5′	265′
35.	Sandstone, massive, gray, micaceous	20′	
36.	Concealed with limestone layers at base, 2′ thick	20′	
37.	Flagy sandstone, and sandy shales	20′	
38.	Concealed	10′	
39.	Limestone	1′	
40.	Concealed	14′	
41.	Limestone, gray	22′	
42.	Concealed to mouth of oil and gas well at 30′ above low water mark in Ohio river	28′	
43.	Conductor hole of oil well record	18′	
44.	Limestone, light gray	40′	
45.	Slate	15′	
46.	Black rock	10′	
47.	*Coal, redstone*	1′6″	
48.	Fireclay	7′	
49.	Hard slate	4′	
50.	Gray limestone	20′	
51.	Bastard limestone	10′	
52.	*Coal, Pittsburg*	6′	
53.	Blue rock	40′	
54	Sand rock	35′	
55.	Black slate	29′	
56.	Shell rock	4′	
57.	White sandstone (Morgantown)	70′	
58.	Red rock	50′	
59.	White sandstone	25′	
60.	Black slate	14′	
61.	Blue rock, soft	15′	
62.	Red rock	33′	
63.	Soapstone	14′	
64.	Red rock	10′	
65.	White sandstone	20′	
66.	Black slate	90′	
67.	Red rock	80′	
68.	White slate	25′	
69.	White sand in which some gas and a smell of oil were obtained near bottom of hole which stopped in this bed	20′	

Summary of the above Section.

No. XVI, or Permian beds, Nos. 1-32, inclusive	395′
No. XV, or Upper Coal Measures, Nos. 33-52	274½′
No. XIV, or Barrens, Nos. 53-69	574′
Totals	1,243½′

The Upper Freeport coal cannot underlie the point at which the drill stopped at the bottom of No. 69 by more than 5′-10′, since in another hole drilled about two miles north from this, a coal 7′ thick was found at a depth of 575 feet below the Pittsburg bed.

About one mile east from the top of this section at Mr. Riggs', the hills rise about 200 feet higher, but Mr. R., who has plughed over all of them, says he has never seen any streaks of coal in the same, but they consist of a monotonous succession of red and greenish shales, with thin limestones and some brown sandstones.

The Washington coal, No. 23, makes a large blosson on the surface at this locality, but as it has never been opened, nothing is known of its character, though from its outcrop one would judge that it has a large bed of shale near its center.

The Waynesburg coal No. 33, is the same bed that has been mined in the vicinity of Moundsville, where it is known as the "4-foot" seam. On the Ohio side of the river it has also been mined in Belmont County, and is there, from its great irregularities, known as the "Jumping 4-foot vein." (Stevenson.)

At the locality of the present section it has been laid bare by a quarry in the sandstone, No. 35, under it. Mr. Riggs once opened it along the road, which ascends the hill, and reports the coal as varying from 2½-3 feet in thickness and rather sulphurous.

The Pittsburg coal, as seen from the boring, underlies the Ohio River about 95 feet at this locality.

A short distance below the mouth of Big Grave Creek the Ohio River veers around abruptly through about 90° of arc, and instead of flowing S. 10° W., as it does between Wheeling and Moundsville, goes N. 80° W. for nearly 3 miles to the mouth of Pike Creek. This abrupt change in the direction of the river's course brings the rocks rising rapidly above it, and at the mouth of Pike Creek on the Ohio shore the Pittsburg coal comes up to within 10 feet of the surface of the water at ordinary stage of the river.

A very steep hill rises from the river on the Ohio side just below the mouth of Pike Creek, and in descending the same Section No. 4 was obtained, as follows:

1. Red shales and concealed from top of hill		50′	
2. Gray shales, sandstone and concealed		95′	
3. *Coal*, blossom, *Washington*			120′
4. Concealed		50′	
5. Massive sandstone		13′	
6. Concealed		25′	
7. Limestone		2′	
8. Concealed		30′	
9. *Coal*, slaty at top, *Waynesburg*		4′	
10. Concealed, limestone and shales		55′	
11. Bituminous slate, fissile (Uniontown coal?)		1′	
12. Limestone, good in several layers		10′	
13. Concealed, with large show of limestone		100′	
14. *Coal and coaly shale*		2′	
15. Sandstone		12′	
16. *Coal, Sewickley*, Coal		0′4″	248′
Shale		1′0″	
Coal		0′2″	
Sandy shale containing fossil plants		5′0″	
Slaty coal		1′8″	
Shale		0′4″	
Coal		1′0″	
Black slate		0′4″	
		10′	
17. Limestone and shales		22′	
18. *Bituminous shale* (Redstone coal)		1′	
19 Limestone and concealed to bed of the Ohio river		25′	
20. *Pittsburg coal*, reported		6′	

The Waynesburg coal, No. 9, has been mined at this locality where it is 4 feet thick, though the upper portion is rather slaty.

The Sewickley coal in the above section I have identified with No. 16, but it should also include No. 14, since this entire interval (Nos. 16–14) 24′ thick, represents the epoch of the Sewickley coal bed, the section of which is a sufficient commentary on the unstable condition of affairs which prevented the accummulation of material for a valuable coal bed, the peat bog having been constantly submerged and buried with mud soon after the peat began to form, so that although nearly 6 feet of coaly material is interleaved through the 24 feet of rocks, it is all useless as a coal bed.

At very low water the *Pittsburg coal* has been mined from the bed of the Ohio at this locality, by shutting off the water with cofferdams ; it is reported as 6 feet thick.

Many people believe that the appearance of the Pittsburg coal so near the surface of the water at this locality, when it is nearly 100 feet below the river 3 miles above, is due to the great upheaval which crosses the river at the mouth of Pike creek, but this is an error, since its emergance is due solely to the change in the course of the river between the two points as already explained. In this vicinity the rocks rise west and north, and of course dip east and south, so that when the river flows west, or north of west as it does here, the rocks rise rapidly above its bed, that had dipped under the same while the river was flowing south.

NO. V. GEOLOGY OF THE OHIO RIVER FROM THE MOUTH OF PIKE CREEK TO NEW MARTINSVILLE.

Just below the locality of Sec. 4, (the mouth of Pike Creek) the Ohio river veers abruptly around to the south, turning through an arc of 100°, and flows even 10°-15° east of south for about four miles. As a result the rocks pitch rapidly under the river, and carry the Pittsburg coal farther and farther from the surface, which it has so closely approached at the elbow in the river near Pike Creek.

Hog run puts into the Ohio river from the W. Va. side about one-half mile above the mouth of Captina Creek, and four miles and a half below Pike Creek. The hills rise almost vertically from the river just above the mouth of Hog run, and expose the following section (5) in descending from their tops :

No. XVI, or Permian Beds.

1.	Concealed from hill top	75′	285′
2.	*Red shale*	10′	
3.	Concealed	15′	
4.	Sandstone, massive	15′	
5.	Concealed and shales	25′	
6.	Limestone, interstratified with shales	20′	
7.	Sandy shales and flagy sandstone	25′	
8.	*Coal blossom*, Washington	5′	
9.	Concealed flaggy sandstone and shales	75′	
10.	Massive sandstone, Waynesburg	20′	

No. XV, or Upper Coal Measures.

11. Concealed, flagy sandstone and sandy shales	70′	
12. Sandstone, flagy	8′	
13. Shales with some *red* below centre	10′	
14. Limestone	10′	
15. Concealed	80′	252′
16. *Coal*, Sewickley	4′	
17. Concealed to low water in Ohio river	15′	
18. Probable depth to *Pittsburg coal*	55′	
Total	537′	

As will be observed from this section, the *Pittsburg coal* underlies the bed of the Ohio at the mouth of Hog run at a depth somewhere between 50 and 60 feet, since No. 8 is unquestionably the coal that we have identified with the Washington, and which in the previous section (4) at Pike Creek, and the one in Chapline hill (2) Wheeling, is found at an elevation of 360 feet above the Pittsburg bed. Above this same coal (Washington) at a height of 95′-100′ is also found a bed of *red shale* which being the first one of any prominence makes quite a conspicuous landmark in the sections at Grave Creek and Pike Creek. It occurs here in the Hog run section at 100′ above No. 8, and of course proves that bed to be the Washington coal.

The *Waynesburg coal* was not seen at this locality, since it is very probably concealed near the top of No. 11.

No. 10 seems to represent the *Waynesburg sandstone* which is here very massive and crops out in a bold cliff along the hill for several miles below this point.

Captina Creek puts into the river from the Ohio side a short distance below the mouth of Hog run, and as its course is toward the south-east, the Pittsburg coal soon rises above its bed in passing from the mouth of that stream northwestward up the same. Along Captina Creek this coal has long been mined in southern Belmont county, Ohio for local supply, and is a very valuable bed, averaging 5′-6′ of good merchantable coal.

From the mouth of Captina Creek the course of the Ohio River is about S. 15° W. to Clarington, Monroe County, O., at the mouth of Sunfish Creek, 16 miles below Moundsville or 28 from Wheeling. In this direction the rocks continue dipping gently below the Ohio as we pass southward from Captina Creek, so that when the mouth of Sunfish Creek or Clarington is reached the horizon of the *Pittsburg coal* has passed far below water level, as the following section (6), taken in descending the steep river bluff just above Clarington, will show:

1. Concealed from top of knob near Mrs. Gotthart's	20′
2. Sandstone, rather massive, brown	8′
3. Concealed	22′
4. *Red shale*	5′
5. Concealed, with 2′ of sandstone at base	10′
6. *Red shale*	10′

7.	Sandstone, massive, grayish brown	15′
8.	*Red shale*, containing iron ore nodules	5′
9.	Brown, sandy shales and shaly sandstone	25′
10.	*Red shale*, marly, with limestone nodules in centre	15′
11.	Sandstone, massive, makes cliff	20′
12.	Concealed	25′
13.	*Red shale*, with limestone nodules near centre	10′
14.	Yellowish, sandy shale	5′
15.	Sandstone, massive and flagy	10′
16.	Shaly sandstone, sandy shales and concealed	35′
17.	*Coal*, reported	3′
18.	Concealed and sandy shales	30′
19.	Sandstone, quite massive	35′
20.	*Coal* (Washington?) reported	3′
21.	Sandy shales and concealed	25′
22.	Sandstone, rather massive	8′
23.	Concealed, and sandy shales	25′
24.	Concealed	40′
25.	*Coal*, slaty at top (Waynesburg?)	4′
26.	Concealed to low water in Ohio river	75′
	Total	488′

This section has given me some trouble, since no intermediate ones were taken (owing to night coming on) between Clarington and Captina Creek, 7 miles above. At first I was inclined to identify No. 17 with the *Washington coal* of the previous Ohio River sections, but then it seemed improbable that the interval between it and the next lower coal should have decreased more than 50′ within seven miles, and then the interval from it up to the first *red bed* is only half that found in the former and other sections. Then, to increase the doubt, the interval between coals 20 and 25 is nearly 100′, or the same as that found separating the *Washington* and *Waynesburg beds* at Wheeling, Moundsville and Pipe Creek (Sections 2, 3 and 4). Added to this is the fact that a shaft beginning 25′ below No. 25 was sunk to a depth of 190′ just above Clarington, but found no *Pittsburg coal*. Hence, taking all the facts into consideration, it seems the most reasonable to identify coal No. 25 with the bed (Waynesburg) which at Wheeling, Grave Creek and Pipe Creek comes 240′-250′ above the Pittsburg bed, and is there, as here, 4′ thick, and somewhat slaty. This determination would place the horizon of the *Pittsburg coal* 165′-175′ below the level of the Ohio River at Clarington.

The attempted shaft to the Pittsburg coal at Clarington was begun in 1877 by Mr. Wm. Bailey, with the expectation of finding the coal at about 100′ from the top of the shaft. But not finding the coal at the expected depth, Mr. Bailey kept on going deeper until all his funds and credit were exhausted, living upon the scantiest fare in order to economize his resources; but the unlooked for depth was against him, and he was compelled to desist, for lack of means, at a depth of 190′, only 25′-50′ above the horizon of the coal, according to my identifications. The cost of the shaft was about $25,000, and it is now partly refilled with rubbish, but could be cleaned out and

finished to the coal at a cost of $2,000-$3,000. Before this expenditure is incurred, however, a hole should first be drilled to be certain that the coal is not absent, since the *Pittsburg coal* disappears farther down the Ohio River, and may be missing at Clarington. This would certainly be true if I have made a mistake in identifying No. 25 with the *Waynesburg coal*, or if, in other words, No 20 of the section is the coal that belongs 240′-250′ above the Pittsburg bed, for then the shaft has already penetrated 60′-70′ below the horizon of the *Pittsburg coal*. For the reasons given, nevertheless, I have much confidence that the conclusion placing the *Pittsburg coal* at 165′-175′ below the coal of the Ohio at Clarington is the correct one, and this is strengthened from the report given me that the shaft stopped in limestone, which had been the prevailing rock for many feet. Since there are no limestones in the *Barrens* under the Pittsburg coal, it would seem certain the horizon of the latter bed had not been passed at the bottom of the shaft.

Only one bed of coal (Sewickley), 12″-15″ thick, is reported as passed through.

The Waynesburg coal, No. 25, is not now mined, though a few years ago several thousand bushels were taken from a bank within the village limits, and sold for local supply. It is somewhat slaty, however, and could not compete with the purer coals shipped from Pittsburg and other points.

The openings in Nos. 20 and 17 had both fallen shut, so that neither of these beds could be seen; the coals are reported, however, to have a thickness of about 3′ each, including parting slates. Also No. 20 is said to be remarkably pure and free from sulphur, being especially prized by the smiths, who formerly carried it down over the steep cliffs in baskets when they wished to do extra fine work.

Just above the mouth of Sunfish Creek, and on the west bank of that stream, just below Clarington, the following section (7) was obtained in descending a steep hill:

1.	*Red shale* with limestone nodules near centre		10′
2.	Concealed and sandy shales		60′
3.	Concealed and massive sandstone		40′
4.	*Coal* blossom, Washington		5′
5.	Sandy shale and flagy sandstone		40′
6.	Bituminous slate, fissile		2′
7.	Flagy sandstone and sandy shales		60′
8.	*Coal, Waynesburg*	slaty coal 0′ 6″	3′6″
		coal, good 2′ 0″	
		slaty coal and shale 0′ 8″	
		coal 0′ 4″	
9.	Yellowish brown sandy shales		17′
10.	Dark blue shale, blackish at base		5′
11.	Sandy shales		5′
12.	Limestone, gray		3′
13.	Concealed to low water in Ohio river at mouth of Sunfish Creek		40′

No. 8 of this section is identical with No. 25 of the previous one above Clarington, and No. 4 is identical with No. 20 of the same No. 17 of the Clarington section (6) was not seen in this one, its horizon being concealed in No. 2. It is a coal, however, that has made its appearance in the section between Pipe Creek and Clarington at about the right distance above the Washington bed for "Washington(a)" coal of Stevenson, in Greene and Washington counties, Pa., though, of course, there is a possibility of its being identical with the *Washington bed*, the interval between it and the *Wagnesburg coal* having thickened by 50′ between Pipe Creek and Clarington. Its position here would come about 425′ above the Pittsburg bed.

Proctor Creek puts into the Ohio from West Va., just south from Marshall-Wetzel county line, and about 5 miles south from Clarington. The following section (8) was constructed in descending from the summit of a high knob to the Ohio river at the mouth of Proctor Creek :

1. Concealed, from top of knob.....25′
2. *Red shale*..... 5′
3. Sandstone and concealed.....25′
4. *Red shale*..... 5′
5. Concealed.....90′
6. Red shale containing layer of good limestone at least 1′ thick..10′
7. Concealed.....70′
8. Flagy sandstone, and concealed.....35′
9. Very massive sandstone, yellowish gray, rather micaceous (*Upper Proctor*).....30′
10. Concealed..... 5′
11. *Deep red shale*.....10′
12. Sandstone, and sandy shales weathering redish.....50′
13. Concealed.....50′
14. *Coal, Washington*, { coaly shale.....4′ / coal, rather pure.....4′ } 8′
15. Concealed.....25′
16. Sandstone, rather massive.....15′
17. Concealed.....10′
18. *Coal blossom*, thin.....
19. Concealed.....10′
20. Sandstone, massive, (*Lower Proctor*).....10′
21. Sandy shales.....15′
22. Limestone, hard, bluish gray..... 2′
23. Shales, gray and blue.....13′
24. *Coal*, impure.....0′ 6″
25. Concealed, with a coal near base reported 3′ thick.....30′
26. Massive sandstone.....15′
27. Sandy shale, bluish.....10′
28. Blue and *red shales*..... 5′
29. Limestone interstratified with shales.....15′
30. Concealed to level of Ohio river, low water at the mouth of Proctor Creek.....25′

The coal reported 5′ thick near the base of No. 25 must represent *Waynesburg bed*, or the one that was mined 75′ above the river level

at Clarington, since No. 29 in the limestone series was seen at Clarington, beginning 25′ below that coal. On this basis the depth of the Pittsburg coal below low water in the Ohio at the mouth of Proctor creek would be about 175′, or almost exactly the same depth as at Clarington, thus showing that the rocks are horizontal between the two points in a north and south line.

The coal No. 14 is possibly the *Washington bed* with the interval between it and the Waynesburg, near the base of No. 23, thickened up to 125′ instead of 100′ as at Wheeling, Grave Creek, and elsewhere along the Ohio river. The bed (No. 14) has been opened at this locality and the lower half is said to be quite good, but the upper portion is slaty and worthless.

Coals 18 and 24 are mere streaks, and seem to come at the horizon of the Waynesburg "A" and "B" coals of Stevenson.

From this locality I have named Nos. 9 and 20, respectively, the *Upper* and *Lower Proctor sandstones*, since the beds in question were found to be quite persistent along the Ohio river below the mouth of Proctor creek for a long distance, making prominent cliff in the river bluffs and proving conspicuous features in the general topography.

A third massive sandstone is often found nearly midway between the two sandstones above designated, and there it has been termed the *Middle Proctor sandstone*.

The Upper Proctor bed, No. 9, is the most persistent and massive one of the three sandstones, and seems to occur at such widely distant points as to well merit a distinct name. It makes the great cliffs at "Walker Rocks," above the celebrated McGugan gas well in Washington county, Pa., as well as many other isolated "Rock cities" in Hickory and other townships of that county. It is the great cliff rock along the Little Kanawha river in the vicinity of Elizabeth and for many miles below, from which the principal supply of building stone is obtained on that stream. And from Elizabeth, in Wirt county, I have followed it both north-east, and south-west, for nearly 100 miles, to the Great Kanawha on the one hand, and the Pennsylvania line on the other, its bold, projecting cliffs and broad "benches" rendering its tracing from hill to hill quite easy, and proving at the same time a most valuable guide or key-rock to the geologist. It has largely affected the topography of all the counties in West Virginia in which the Permo-Carboniferous beds are well developed, by its power to resist erosion, having given rise to a majority of those narrow, "hog-back" ridges so frequently found in Wetzel, Tyler, Ritchie, Wirt, Roane, Jackson, and other counties of West Virginia adjoining these. Its economical importance is also very great, since it is nearly always an excellent building stone, dressing easily, and resisting atmospheric decay much better than any other Permian sandstones, which, as a rule, disintegrate with marked rapidity before the combined attacks of heat, frost, and

the chemical agencies in the atmosphere. The rock is rather coarse in grain, slightly feldspathic, of a yellowish-brown, or gray color, and usually contains many scales of mica.

About two miles below the mouth of Proctor Creek, the following section (9) was taken in descending a steep hill on the Ohio side of the river:

1.	Very massive sandstone, *Upper Proctor*		35′
2.	Concealed		20′
3.	*Red shale* with limestone nodules in middle		10′
4.	Sandstone		10′
5.	Concealed and sandy shales		65′
6.	Sandstone, massive		15′
7.	Shales and Concealed		10′
8.	*Coal, Washington*	coal, impure, slaty	2′
		shale, dark, hard	0′ 1″
		coal, very pure	1′11″
			4″
9.	Flaggy sandstone and concealed		60′
10.	Massive sandstone, *Lower Proctor*		40′
11.	Limestone, light gray		5′
12.	*Coal*, reported		2′
13.	Concealed and shales with some impure limestone		50′
14.	Concealed to low water in Ohio river		50′

The Upper Proctor sandstone makes a bold escarpment along the Ohio hills at this locality, and the talus from its cliffs is scattered over the slopes below.

The Washington coal, No. 8, has been opened and mined to a small extent by J. W. Litman, from whom the structure noted above was obtained by student Johnson. The lower portion of this coal is reported by Mr. Litman as almost perfectly pure, and free from sulphur, bringing 2 cents per bushel more for smithing purposes than any other coal in the river market. This agrees quite well with the character of the *Washington coal* in Marion an Monongalia counties where the lower bench of this bed is remarkably pure, but the upper is always slaty and worthless.

The Lower Proctor sandstone, No. 10, has here assumed quite massive proportions, and juts out of the hill in a great cliff which weathers so easily that the rock is honey-combed with cavities.

The Limestone No. 11, is light gray, rather pure and identical with the 2′ bed, No. 25, of the previous section.

A coal, slaty and otherwise impure, is reported directly beneath the limestone.

The Pittsburg coal, if present, would come about the same depth below the Ohio at this point as at Clarington, and Proctor, viz: 175—200 feet.

Fishing Creek puts into the Ohio from the West Virginia side at the town of New Martinsville, 5 miles below the locality of the last section, and 40 miles below Wheeling by the river channel meanderings.

About one mile up this stream, and the same distance southeast from New Martinsville, a steep and rugged hill rises abruptly from

the right bank of the creek to an elevation of nearly 600′ above the same, and in descending from the summit of this lofty knob the following interesting section (10) was obtained:

1. Red shale on top of knob..... 5′
2. Concealed.....45′
3. *Red shale*..... 2′
4. Limestone, X of Stevenson's, Greene and Washington Co. series, fossiliferous, pure, in several layers separated by shales.....10′
5. *Red*, marly shale..... 5′
6. Concealed, with sandstone visible at top.....30′
7. *Red shale*..... 5′
8. Sandstone, sandy shales and concealed.....30′
9. *Red shale*.....10′
10. Sandstone, massive.....10′
11. Concealed.....35′
12. *Red shale*..... 5′
13. Concealed.....25′
14. Sandstone, brown, massive.....10′
15. Sandy shales.....23′
16. *Red shale*..... 2′
17. Sandstone.....25′
18. *Deep red shale*..... 5′
19. Sandstone and sandy shales.....25′
20. Concealed and sandy shales..... 20′
21. *Red* and marly shales with small scattered limestone nodules.. 5′
22. Sandy shales.....15′
23. Sandstone, massive.....20′
24. Sandy shales.....15′
25. *Red shales* with small limestone nodules..... 5′
26. Gray, sandy shale ..... 2′
27. Sandstone, shaly and massive..... 30′
28. Sandy shales..... 3′
29. Limestone, impure..... 2′
30. Sandy shales.....20′
31. *Coal, Washington*, upper half slaty..... 4′
32. Sandy shales..... 5′
33. Massive sandstone, *Lower Proctor*.....35′
34. Concealed and sandy shales.....25′
35. Concealed to low water in Ohio river at mouth of Fishing creek.....45′

Total..... 558′

This entire section belongs to the *Permian* or *Permo-carboniferous series*, and is an admirable illustration of the general composition of those beds after passing above the horizon of the Washington coal, viz: a monotonous succession of *red shales*, and soft, micaceous, brown sandstones, and sandy shales, interstratified with which not a vestige of the small *coal beds* which are such a prominent feature in the lower 600′ of *Permian rocks* in Monongalia, Marion, and Marshall counties, is to be seen, unless two or three faint traces of fireclay may be considered as representing the *Jolleytown*, *Dunkard*, and *Nineveh coals* of those counties.

One member of the *Permian series*, however, appears in this section as a marked exception to the changing character of so many of the beds, viz: *Limestone X* of Stevenson's series, or No. 4 of the section. It seems to spread in an unbroken (except by erosion) bed from Washington county, Pa., south-westward through West Virginia, nearly to the Great Kanawha river, for I have found it caping the summits of the ridges near the western line of Jackson county, and never absent at its proper horizon from there north-eastward to the Pennsylvania line. It seems to mark the basin of a great inland sea, which in Permian times covered South-western Pennsylvania and a large portion of West Virginia, the larger diameter of which was rudely parallel to the Ohio river of the present.

The limestone is bluish gray, breaks with a sharp, clean fracture, and is quite pure. It is filled with minute fossils, of which a univalve somewhat resembling *Spirorbis corbonarius*, Dawson, but different from it, is the most abundant. Along with this are other small shells that are seemingly bivalve crustaceans, allied to *Cypris* and *Estheria*. No marine forms were seen, and the great inland sea in which this limestone accumulated was evidently fresh water, or but slightly brackish.

This limestone, from its wide distribution above water level in West Virginia, is of great economical importance to the farming and agricultural interests, and yet it has been almost entirely neglected by those most interested. The suggestive fact that wheat thrives with unexampled luxuriance on its outcrop and often for many rods below the same, seems to have given the farmer no hint that this lime could be used to great advantage over all his land, thereby increasing his wheat and other crops at least two-fold. There are probably not 20 farmers in West Virginia that make any use whatever of this limestone on their land, and yet at least that many thousand of them have access to it, and could greatly profit by burning and scattering this valuable fertilizer over their lands, especially those intended for wheat. Luckily its position, so high up in the series of rocks, brings it far up near the tops of the ridges and knobs over a very wide extent of country (and hence is often called "ridge limestone" by the farmers), and thus by the natural means of solution and erosion it has fertilized large areas near the summits of broad, level-topped hills which it has been the agent in producing, and also a wide band of the slopes below, into which it has been carried by solution. Of this happy chance the farmer has long reaped the benefit, and thus this limestone has not been entirely wasted, though it has been through no good management of the agriculturists in these counties.

This limestone is a most valuable key-rock to the geology of the several counties of West Virginia in which it is found, coming as it does 400′ above the Washington coal, and 750′–800′ above the Pitts-

burg bed. Its position in Greene and Washington counties, Pa., is only 400′ below the highest of the Permian beds found there by Prof. Stevenson and myself in our survey of those counties in 1875.

The Washington coal, No. 31, has been mined to a small extent along Fishing creek for local supply, but the upper half is quite slaty and worthless. The section shows that this coal has sunk to 100′ nearer river level than it was in the last section, 5 miles above New Martinsville. This rapid fall of the rocks is due to the fact that the Ohio river flows 15°–20° east of south from the locality of that section to the mouth of Fishing creek. Of course this dip carries the Pittsburg coal horizon down deeper to the same extent, and hence, if that coal be present in the series at New Martinsville, it would be found at a depth of 250′–300′ below the bed of the Ohio river.

This depth is rather too great to warrant the expense of shafting at present, and New Martinsville should try the experiment of boring for natural gas, of which, with little doubt, a most abundant supply could be obtained. The depth to the first gas bearing beds would not be more than 1200 feet, but to reach the Wellsburg gas bearing sand at New Martinsville, the drill would have to penetrate the rocks to a depth of 1900′–1950 feet.

NO. VI. THE GEOLOGY OF THE OHIO RIVER FROM NEW MARTINSVILLE TO MARIETTA.

From New Martinsville the Ohio river takes a course not far from S. 45° W. on which it continues to flow for nearly 30 miles, making the long, straight sweep known on the river as Long Reach. For some distance below New Martinsville, the rocks are nearly horizontal with reference to the Ohio river, so that the horizon of the *Pittsburg coal* remains nearly the same as at the latter town, viz: at 250-300 feet below the level of the Ohio river. This will be rendered plain by the following Section (11) taken in descending a steep hill on the West Virginia shore, one mile above Sistersville, Tyler county, and nine miles below New Martinsville:

1. Soil and *red shale* from tob of knob .....15′
2. *Deep red shale*.....20′
3. Sandstone and concealed.....10′
4. *Red marly shale*..... 5′
5. Concealed .....30′
6. *Deep red, marly shale*.....10′
7. Concealed.....35′
8. *Coal, Jolleytown*, a thin streak thickness only.....2″-3″

9.	Shaley limetone and fire-clay	1′	
10.	Shales	5′	
11.	Sandstone, massive	10′	
12.	Concealed	5′	
13.	*Red shale*, containing nodules of iron ore	5′	
14.	Concealed	60′	
15	Sandstone, rather massive	10′	
16.	Concealed and shaly sandstone	30′	
17	*Deep red shale*	15′	248′
18.	Sandstone and sandy shale	15′	
19.	*Deep red shale*	10′	
20.	Sandstone	2′	
21.	Marly, gray shale	10′	
22.	*Red shale* with small limestone nodules at base	10′	
23.	Shales and shaly sandstone	5′	
24.	Sandstone, flaggy	10′	
25.	Sandstone shales and concealed	35′	
26.	Sandstone, rather massive	15′	
27.	Concealed	5′	
28.	*Coal, Washington, blossom*	—	
29.	Concealed	20′	
30.	Flaggy sandstone	20′	
31.	Concealed to low water in Ohio river	50′	
	Total	473′	

This hill is not high enough by about 30 feet to reach the horizon of *Limestone X*, since that stratum belongs 400′ above the *Washington coal*, while the hill rises to only 370′ above the latter.

It extends up however far enough to catch a representation of one of the *Permian coals*, which has a wide distribution in southwestern Pa. and Monongalia, Marion and Wetzel counties of W. Va. This is No. 8 of the section, a thin streak of *coal* which seems to represent the *Jolleytown coal bed.*

In Greene Co. Pa , where this bed was first named by Prof J. J. Stevenson, it comes 260′-275′ above the *Washington coal*, and is the first bed above the latter that ever furnishes any workable coal, since it sometimes attains a thickness of 2½ feet. It has been absent in all the sections, however, along the Ohio, between Moundsville and New Martinsville, unless a thin seam of fire-clay with the slightest trace of dark slate seen in the New Martinsville section should be identified with this coal.

The section shows that the coal comes 248′ above the *Washington bed* at Sisterville, thus like all the other intervals exhibiting a slight westward decrease in thickness.

The interval from the *Jolleytown coal* to *Limestone X* in Greene county, Pa., is 165 feet, against 155 here on the Ohio river.

The Washington coal has not been mined in the vicinity of Sisterville, as far as I could learn, so that nothing is known as to its thickness or quality there, though judging from the black streak made in the soil by its outcrop the coal cannot be more than 2½′-3′ thick.

Several small, rounded boulders were observed on the very summit of the knob where the section begins at an elevation of something

like 1050 feet above tide. Since this is the only locality along the Ohio river between Wheeling and the Kentucky line where rounded boulders were observed at more than 60′-80′ above the river, I am inclined to believe that those near Sistersville were carried up from the river by the Indians, since some chipped flints, a mortar and pestle found on the knob, prove it to have been one of their camping sites, though if Rev. G. F. Wright's theory be true that the waters of the Ohio were in Glacial times set back by a great dam of ice 500′-600′ high, which, as the terminus of the Northern Ice-sheet, crossed the Ohio valley into Kentucky above the site of Cincinnati, then these rolled boulders on the summit of the Sistersville hill could be readily accounted for, since they come at about the upper limit of the back-water which such an ice dam would make.

A wide terrace occurs at Sistersville, the top of which makes a beautiful plain 60 feet above low water.

About one-half mile below Long Reach P. O. and eight miles below Sistersville the hills rise abruptly on the Ohio side, and in descending from their summits the following Section (12) was constructed :

1. Concealed from top of knob	5′	
2. Sandstone, brownish gray	5′	
3. Concealed	10′	
4. *Red shale*	5′	
5. Sandy shale	15′	
6. Massive sandstone	10′	130′
7. Concealed	20′	
8. Red and variegated shale containing iron ore nodules	20′	
9. Concealed	15′	
10. Sandstone, massive	10′	
11 Concealed	15′	
12. Fireclay with appearance of thin *coal streak*, *Jolleytown*	½′	
13. *Red shale* and concealed	10′	
14. Sandstone, very massive, gray	20′	
15. Concealed	25′	
16. Marly shales containing small limestone nodules	10′	
17. Concealed	5′	
18. Sandy shales, and flaggy sandstone	30′	
19. Sandstone, massive	15′	250′
20. Concealed	10′	
21. Shaly sandstone and shales	25′	
22. Gray shales	35′	
23. *Red shale* with rich iron ore nodules	10′	
24. Concealed	20′	
25. *Red shale*	20′	
26. Sandstone and concealed	15′	
27. *Coal*, *Washington*, blossom	—	
28. *Red shale*	10′	
29. Sandstone, massive	20′	
30. Concealed	10′	
31. *Limestone*, light gray, rather pure	2′	
32. Concealed	40′	150′
33. Variegated shales interstratified with impure limestones	10′	
34. *Red shale*	15′	
35. Fireclay and shales	3′	
36. Concealed to low water in Ohio river	40′	

This section shows that the rocks have risen above river level about 60′ from the locality of the last section (near Sistersville) to this point, and consequently the horizon of the *Pittsburg coal* has approached that much nearer the surface than it was at Sistersville, and ought to be found here, if present, at a depth somewhere between 200 and 250 feet.

The *coal streak*, No. 12, seems to represent the *Jolleytown bed* because it comes at the same interval above the *Washington coal* (No. 27), as the one which was identified with the *Jolleytown coal* in the Sistersville Section (11).

The Washington coal is but feebly represented in this section, since if one can determine anything from its decomposed outcrop the coal cannot be more than one foot thick, and is quite slaty besides.

At Raven Rock P. O., four miles below Long Reach, the river bluff on the W. Va. side is capped with an enormous sandstone from which the descent to the Ohio river is almost vertical for more than 300 feet. In descending from the summit of the Raven Rock cliffs the following Section (13) was obtained:

1.	Sandstone, *Upper Proctor*, very massive	45′	
2.	Soft gray shales	35′	
3.	Flaggy sandstone	5′	
4.	Sandstone, *Middle Proctor*, very massive, current-bedded, micaceous	20′	
5.	Shales, gray	15′	
6.	*Red shale*	20′	
7.	Flaggy sandstone	5′	
8.	Gray shale	3′	
9.	*Red shale*	2′	
10.	Gray shale	2′	
11.	Calcareous lean iron ore	1′2″	
12.	Red and gray shales	15′	
13.	*Coal and black slate*, *Washington*	1′	
14.	Fireclay and shales	3′	176′
15.	*Limestone*, impure, sandy	2′	
16.	Sandy shales	3′	
17.	Sandstone, *Lower Proctor*, massive	20′	
18.	*Limestone*, light gray, good	5′	
19.	Concealed	15′	
20.	*Limestone*, interstratified with *red* and greenish shales	50′	
21.	Concealed	25′	
22.	*Red shale*	3′	
23.	Sandstone, flaggy and massive, Waynesburg	20′	
24.	Concealed to low water in Ohio river, but containing a *coal*, (Waynesburg) reported 3′ thick about 10′ below top of interval	30′	
	Total	345′	

Here, as will be seen from the section, the *Washington coal* has risen 25′ higher above the river than it was in the previous section, 3½ miles above, thus bringing the top of the *Upper coal group*, or No. XV, above river level, since No. 23 seems to represent the *Waynesburg sandstone*, and a *coal* is reported as occurring a short

distance under it, which would be the *Waynesburg bed*, the top member of XV.

The Upper Proctor sandstone, No. 1, caps the hill at this point, and on its top lie two or three enormous loose blocks of sandstone, which must be a portion of the same bed broken up by erosion, so that the original thickness of the *Upper Proctor* stratum at this locality must have been 60′–75′. The rock is rather coarse, soft, somewhat feldspathic and of a yellowish gray color.

The scenery around these massive sandstones is very wild and picturesque, and the locality is much frequented by pleasure parties.

The limestones in No. 20 are mostly of a bluish color, and impure. Some of the layers would probably make hydraulic cement.

Below Raven Rock P. O. the Ohio River bends toward the west for more than a mile, and the rocks rise quite rapidly above its surface, bringing up the *Waynesburg coal* to 75 feet above the river.

The following Section (14) was observed on the Ohio river 2½ miles below Raven Rock:

1.	Sandstone, coarse, very massive, *Waynesburg*	35′
2.	Shales	5′
3.	*Coal*, *Waynesburg*, with a shale parting near centre	3′
4.	Concealed to low water in Ohio river	80′

The *Waynesburg sandstone*, No. 1, stands out from the river bluffs in a very bold escarpment, and when followed down the river from this point thickens up to 50′ or more, making an immense cliff that is constantly in sight until we come to St. Marys, the county seat of Pleasants, 3 miles below the locality of the last section.

The coal, No. 3, has been mined to a small extent, but is reported as slaty and sulphurous to such a degree as to be practically worthless.

At St. Marys the following Section (15) was made in descending the hill near the tannery:

1.	*Upper Proctor sandstone* left in small blocks on the summit of the knob from which it has been eroded	—
2.	Concealed to base of steep bluff indicating sandstone	140′
3.	*Red shale* and concealed	40′
4.	Sandstone	7′
5.	Sandy shales	20′
6.	Concealed and *red shales*	50′
7.	Shales, yellowish brown	5′
8.	*Sandstone*, *Waynesburg*, very massive, rather soft, micaceous, light gray	25′
9.	Shales, dark at base	5′
10.	*Coal*, *Waynesburg*	?
11.	Concealed	12′
12.	Sandstone, flaggy	3′
13.	Shales, variegated	7′
14.	Sandstone, rather massive	5′
15.	Gray sandy shales	5′
16.	Concealed to low water in Ohio river	35′
	Total	359′

The series of impure limestones seen in Section 13 at Raven Rock, where they are 50′ thick and interstratified with *red shale*, were not observed in this section, being very probably covered up by surface accumulations in No. 6 of the above section, though it is quite possible that a large amount of the limestone has disappeared, since only a few layers of these rocks were observed in the steep hill-side above the *Waynesburg sandstone* at the locality of Section 14, 3 miles above St. Marys.

The Waynesburg sandstone has been quarried for building stone at this locality and also for the construction of bridge piers and abutments on the new Ohio River R. R. It splits easily and dresses well into blocks of any desired size, but being somewhat feldspathic, it will doubtless not resist weathering very effectively. This stratum, No. 8, has been identified with the *Waynesburg sandstone* on the basis of its stratigraphical position, massiveness and general features, though it is not impossible that it may turn out to be the *Pittsburg sandstone*, and the coal under it the *Pittsburg coal*, since I am not satisfied with the sudden disappearance of the bluff limestone group seen in the section at Raven Rock.

The Waynesburg coal, No. 10, has been mined on a small scale at this locality, but the opening was closed, and the coal concealed, except its blossom, at the time of our visit.

Not more than 300 yards southwest from the locality of the last section, the structure of the rocks shows the following (Sec. 16) succession:

1. Concealed from summit of knob	220′
2. *Waynesburg sandstone*, very massive, feldspathic, pebbly near centre, yellowish gray	70′
3. Shales	0′–5′
4. *Waynesburg coal*, impure	1′–3′
5. Fireclay and sandy shales	5′
6. Concealed	15′
7. Sandstone, massive	5′
8. Concealed to low water in Ohio river	40′
Total	363′

Here the *Waynesburg sandstone* has increased in thickness nearly three-fold inside of three hundred yards, at the same time growing quite coarse, and even conglomeratic, for at 30′ above its base a layer 3–5′ thick is a perfect mass of quartz pebbles from the size of a pea up to a chestnut.

The shales under this sandstone exhibit erosion from the deposition of the latter, since they constantly change in thickness and the sandstone rests upon them with local unconformity.

The Waynesburg coal, No. 4, was also once mined to a small extent at this locality, but it is quite thin, varying in thickness from 1′–3′, and contains much sulphur and other impurities.

When followed down the river from St. Marys, the rocks seem to rise quite rapidly, since we are now approaching the locality where

the "Oil Break" of Volcano, Burning Springs and other places in Wood and Wirt counties, crosses the Ohio river.

About a mile below St. Marys some oil has been obtained at a locality known as Van Cluse. A 11-barrel well of light gravity oil was struck at a depth of 357 feet. The base of the *Waynesburg sandstone* occurs here at an elevation of 150′ above the low water in the Ohio river, according to a barometrical measurement by Student Hartigan, and as the oil well begins 30′ feet above water level, it would start 120′ below the *Waynesburg coal*, or 130′–150′ above the *Pittsburg coal horizon*, and hence the *oil rock* is most probably the *Morgantown sandstone*. This same stratum is an oil reservoir in the Dunkard oil region of Greene county, Pa., some of the largest wells found there having been obtained in the *Morgantown sandstone*.

Much interest attaches to the borings made in the Van Cluse district, since in none of them was the *Pittsburg coal* found. One well was drilled to the depth of 1300 feet, but no oil was found below the sand struck at 350 feet. In this boring a large bed of *coal* was struck at a depth of 700 feet. This would most probably represent the *Upper Freeport coal*, since it comes to the horizon where that bed ought to be found, viz: 550′–570′ below the place for the *Pittsburg coal*.

The absence of the *Pittsburg coal* from the series at this locality was not expected, since it is so regular and persistent in its distribution to the north, or at least from Pipe creek northward. Just where this irregularity in the *Pittsburg coal* begins on the Ohio river is not known, and nothing but the drill can reveal it, since this is the first point below Pipe creek, 50 odd miles above here, at which we have had any information concerning the presence or absence of this important coal bed, because its horizon has been below river level all the time between two points and no drill holes of which we could learn, have been sunk along the Ohio in this interval. It is possible that St. Marys may be the northern edge of the barren patch in the *Pittsburg bed* which extends through to Burning Springs on the Little Kanawha river, and with many interruptions of productive areas, spreads to the Great Kanawha and on southwestward to the extreme outcrop of the *Pittsburg coal*, near the Kentucky line, thus seriously impairing the formerly supposed continuity of this famous bed, and greatly reducing the area over which it can ever be mined. This *barren area* in the *Pittsburg marsh*, may, however, for ought we know at present, extend much farther north than St. Marys, possibly reaching to the vicinity of Sistersville, in Tyler county, half way to Pipe creek, so that no shafts should ever be sunk for this coal below Pipe creek without first sinking a drill hole to learn whether or not the coal is present.

One-half mile below Van Cluse, a very massive sandstone is seen making a line of cliffs along the Ohio side of the river with its base

at an elevation of 210 feet above water level. Immediately under it is a bed of light gray limestone 2′ thick.

About one mile below Van Cluse, the following succession, (Sec. 17) was obtained in descending a steep hill on the Ohio side of the river:

1.	Concealed from top to knob	5′
2.	Sandstone, massive	35′
3.	Concealed, gray, and *red shales*	50′
4.	Sandstones	5′
5.	*Red shale*	15′
6.	Sandstone, shaly and massive	25′
7.	Concealed	45′
8.	*Red shale* and concealed	70′
9.	*Coal Blossom*	
10.	Concealed to low water in Ohio river	105′
	Total	355′

Just below this, another exposure gave the following Section (18) in descending to the Ohio:

1.	Concealed from top of knob	15′
2.	Sandstone, massive, weathering easily	30′
3.	*Limestone*, light gray, below which come *red shales* with interstratified limestones	70′
4.	Sandy shales, flaggy sandstone and concealed	105′
5.	Sandstone, coarse, massive	30′
6.	Concealed to low water in Ohio river	10′
	Total	260′

These sections exhibit such a complete change in the character of the rocks from those exhibited in the sections at St. Marys that it requires very little credulity to believe that they are in a totally different geological series, and such indeed seems to be the fact, for in this vicinity the great "Oil Break" anticlinal of the Burning Springs, and Volcano district in West Virginia, crosses the Ohio river, carrying into daylight the horizon of the *Pittsburg coal*, and even bringing the *Crinoidal limestone* above water level. These facts were first brought to the attention of geologists by a paper published in the "American Journal of Science," for July, 1860, by the late Prof. E. B. Andrews, who states that the centre of the "Oil Break" arch crosses the Ohio river near the mouth of Conley run, where a fossiliferous limestone, which he identified with the *Cambridge bed*, is 65 feet above the level of the Ohio river. Some blocks of a fossiliferous limestone which looks much like the *Green Crinoidal bed* were seen scattered over the surface along the river's bank at the locality of Sec. 18, but the stratum from which they came was not found in place.

The horizon of the *Pittsburg coal* at the centre of the "Oil Break" uplift would be, according to Andrews, about 300 feet above the level of the Ohio river, and consequently should occur in the tops of the river hills if present in the series. But since no workable coal is known in this region, it follows that the uplift confirms the absence

of the *Pittsburg bed* as a valuable seam from this region, as already stated in connection with the Van Cluse oil borings.

A small bed of coal was once opened by Mr. Bell on the Ohio side, and one-half mile north from the river. It is reported as only 2 feet thick, and rather impure, and this is the only coal of which we could learn anything within the "Oil Break" arch.

Our limited time for work along the Ohio river where there is so much sameness in the rocks prevented our undertaking a study of the "Oil Break," since the region where it crosses the Ohio is quite poor in exposures, and we would necessarily have been compelled to go several miles from the river in order to work out its structure satisfactorily, hence in my statements concerning the extent of the uplift, I have trusted to the accuracy of Prof. Andrews' work, which, in the limited examinations that we were able to make, I found no reason for questioning.

From the locality of the last sections on down the Ohio, the hills recede from the river, and the rocks are mostly concealed with a thick covering of debris. When the rocks do stand out in cliffs they appear much broken and shattered. No sections were obtained between the locality of Sec. 18 and Marietta, a distance of 18 miles, and hence nothing positive can be asserted with reference to the geological column represented along the river hills, but there can be little doubt that with the exception of the narrow belt involved in the "Oil Break" arch, the most of the beds which make up the river hills belongs to the Permo-carboniferous series, or to that portion of the column belonging above the horizon of the Waynesburg coal.

NO. VII. THE GEOLOGY OF THE OHIO RIVER FROM MARIETTA TO POINT PLEASANT AT THE MOUTH OF THE GREAT KANAWHA.

Below the mouth of the Muskingum river, the hills become once more abrupt on the Ohio side, and one mile and a quarter from Marietta the following succession (Sec. 19) was obtained in descending from the summit of a steep hill:

1. Concealed	30′
2. Sandstone, massive	30′
3. Concealed	20′
4. Sandy shales and flaggy sandstone	12′
5. Sandy, very massive, quarries	43′
6. Variegated shales	10′
7. Concealed and sandy shales	70′
8. Variegated shale	5′
9. Concealed to low water in Ohio river	90′
Total	310′

The upper half of this section certainly belongs in the *Permo-carboniferous*, and possibly all of it, since no *coal* whatever was seen in the whole 310 feet. As stated in a previous paper, we did not keep hold of the rocks from St. Marys to Marietta across the "Oil Break" axis, for the reason that exposures are poor along the river, and we could not spare the time to carry the section across the country back

from the stream, hence in the absence of all characteristic rocks from the section just given, there is much uncertainty as to its exact place in the series, though I am inclined to believe that No. 5 represents the *Middle Proctor sandstone*, or the one which occurs 50′-60′ above the *Washington coal*, in Sec. 13, at Raven Rock.

About one mile below the locality of the last section, the Lake Huron Stone Co. has extensive Grindstone quarries on the Ohio side of the river, and in descending the steep bluff at that point, Sec. 20, exhibits the following :

1. Sandstone, grayish white, massive, quarried for grindstones...45′
2. Concealed and red marly shale .....30′
3. Gray sandy shale.....10′
4. Sandstone, massive, grayish white, quarried for grindstones...45′
5. Shale..... 3′
6. *Coal*, impure ..... 1′
7. Concealed.....60′
8. Coarse, massive sandstone to low water in Ohio river.....15′

Total.....209′

Concerning the identity of coal No. 6 there is much reason for uncertainty. The late Prof. E. B. Andrews termed it the *Hobson coal*, and regarded its place in the series as about 200′ above the *Pittsburg bed*. In our work along the Ohio no coal bed has been seen at 200′ above the Pittsburg seam, but a bed (*the Waynesburg*) comes at 240′–260′ above the latter coal, and another, (*the Washington*) at 100′–120′ higher. It is possible that the little coal in the preceding section may represent one of these latter beds, and if so, the probabilities are in favor of its being identical with the *Waynesburg bed*, since the *Washington coal* has never been seen with a massive sandstone for its roof, while this feature is almost universally present with the *Waynesburg seam*.

The Lake Huron Stone Co. has large quarries in the sandstones Nos. 1 and 4, from which grindstones are manufactured, and extensively shipped, principally for use in cutlery works.

Beyond the locality of the last section the Ohio river veers southward, and finally flows about due south to Parkersburg, at the mouth of Little Kanawha river, 12 miles below Marietta. In the last 10 miles of this distance no sections were obtained, since the exposures are not good, and the hills retreat from the river.

The following succession was observed at Parkersburg in descending from the Jackson Stone quarry, on the Northwestern Turnpike, to the Ohio river (Sec. 21):

1. Concealed from the top of a terrace, containing rounded pebble sand boulders..... 40′
2. Sandy shales..... 10′
3. Sandstone (*Upper Proctor*), quarried for building purposes... 25′
4. Concealed and deep red with scattering limestone nuggets..... 15′
5. Concealed ..... 80′
6. *Coal* (*Washington*) reported as one foot thick at low water in the Ohio ..... 1′

The rocks of this section are the first we have found in the Ohio river hills below St. Marys, in Pleasants county, 30 miles above Parkersburg, about whose identity there has not been much doubt. Here, however, our uncertainty ends, since from Parkersburg southward we succed in keeping safely hold of the rocks until the *Pittsburg coal* comes up again at Hartford City. It is in consequence of this southward tracing of the strata that the identifications in this section are regarded as trustworthy.

The Upper Proctor sandstone, No. 3, is a yellowish gray, micaceous, and somewhat feldspathic rock. Owing to its presence within the corporation limits, and the facility with which it can be quarried and dressed into blocks of any desirable size, it has unfortunately been largely employed in the construction of Parkersburg buildings. That it is entirely unfitted for such purposes any one can determine for himself by observing the rapidity with which it weathers away on all exposed surfaces. This is due principally to the large quantity of disseminated feldspathic material which it contains, since the chemical action of the air and water on this breaks up the coherence of the sand grains, and causes the rock to waste gradually away. It should never be used in any portion of a building exposed to the elements, for its rapid rate of decay will, in a few decades, at most, ensure the destruction of any fabric into whose construction it has entered.

The Washington coal, No. 6, was not seen, being submerged by 6′-8′ of water at the time of our visit to Parkersburg, but we learned from reliable sources that it exists in the position assigned, and can be seen at low water. This identification being correct, the horizon of the *Pittsburg coal* should be found at about 360′ below the level of the Ohio river at Parkersburg. The probabilities are, however, that the *Pittsburg coal* is absent, as a workable bed, in the vicinity of Parkersburg, since it is absent where its horizon is elevated to daylight in the "Oil Break" at Burning Springs and other localities along that line only a few miles from the mouth of the Little Kanawha. Certainly no shaft should ever be sunk for it at Parkersburg without first testing its presence with the drill. Just below Parkersburg some one has already sunk a shaft to the depth of nearly 100′ in search of coal without having drilled any test holes, so far as we could learn. It is needless to state that such methods of exploration are very unwise, to say the least, in a region where no coal of workable value is likely to be found until a shaft has been sunk to the *Lower Coal measures*, the top of which cannot well be less than 800′ below the level of the Ohio at Parkersburg; and if Mr. F. W. Minshall's identifications be correct, it would be 1,100′ to the top of the *Lower Coal measure*. This gentleman has given considerable attention to the local geology at Parkersburg and vicinity, and he finds reason for believing that the *Pittsburg coal horizon* underlies the Ohio river at Parkersburg at a depth of 640′, instead of 360′, as determined by

my identifications. That Mr. Minshall is in error is rendered certain, not only by our tracing of the rocks from Parkersburg southward, but also by the fact that if the *Pittsburg coal* horizon was indeed 640′ below the Ohio here, then *Limestone X* should be found in the Parkersburg hills at an elevation of little more than 100′ above the river, whereas it is not found until we pass 3–4 miles back into the country and at an elevation not less than 400′ above the river, which is just where it ought to come if the little coal, No. 6, is the *Washington*, since this limestone is always found at about 400′ above the latter coal, being exactly like that on the Ohio river at New Martinsville, in Wetzel county. (See Sec. 10.)

Just across the Little Kanawha river from Parkersburg the following Section (22) was obtained in descending a steep hill from the site of old Fort Boreman:

1. Sandy shales from top of hill.....10′
2. Sandstone, gray, rather massive.....25′
3. *Red shale*, and concealed.....45′
4. Sandstone, brown, massive.....20′
5. *Red*, marly shales, shaly sandstone and concealed, with red shale at base.....95′
6. Concealed to low water in Ohio river.....95′

Here the *Upper Proctor sandstone*, which is such a conspicuous member of the former section, has thinned away to so great an extent as to be scarcely recognizable, though a stratum of sandstone in No. 5, whose base comes 125′ above the river, appears to be its equivalent. It is only 10′–15′ thick, however, and not very massive.

As we pass down the Ohio river from Parkersburg, a bed of massive, pebbly sandstone soon makes its appearance above water level, and is constantly in sight for many miles below.

One mile below the lower end of Blennerhasset island, the following succession was observed on the Ohio side (Sec. 23):

1. Concealed from top of knob.....100′
2. Sandstone, yellowish brown, flaggy..... 10′
3. Concealed..... 10′
4. *Deep red shale*..... 20′
5. Sandstone, flaggy..... 5′
6. Concealed, and shales..... 30′
7. *Red shale*..... 5′
8. *Coal, blossom, Washington*..... —
9. Concealed, and shales..... 15′
10. Sandy shale and flaggy sandstone..... 10′
11. *Sandstone, Wagnesburg*, massive, pebbly, visible..... 20′
12. Concealed to low water in Ohio river..... 45′

Total.....270′

No. 8 is the little coal which makes its appearance near water level at Parkersburg, and which we have there identified with the *Washington bed*. Its position here at 90′ above low water would place the horizon of the *Pittsburg coal* 250′–275′ below river level, though the coal itself is doubtless absent as a workable bed.

No. 11, the *Waynesburg sandstone*, is the massive, pebbly rock which rises from the river a short distance below Parkersburg, and with but slight interruptions, is constantly seen as a great cliff along the river hills for nearly 50 miles. It is quite pebbly in streaks, some of the quartz pebbles being an inch in diameter, and the stratum sometimes attains a thickness of nearly 100′. This great pebbly sand-rock is quite soft and coarse, and seldom furnishes any good building stone.

At Murraysville, in Jackson county, 25 miles below Parkersburg, this great cliff-rock rises to 120′ above the Ohio, and a thin *coal* (Waynesburg) is reported under it here, as well as on the Ohio side near Long Bottom.

A well was once drilled for oil to a depth of several hundred feet, just below Long Bottom, beginning about 45′ above the Ohio river. In this boring a thick (12′) bed of coal is reported to have been passed through somewhere between 250 and 290 feet. This would come at the proper horizon for the *Pittsburg bed*, and, if the report be true, would show that this important stratum has again made its appearance in the river after having been absent along the Ohio from the vicinity of St. Marys to several miles, at least, below Parkersburg, or a distance of probably 50 miles. From Murraysville, southward, however, this coal, of workable thickness, has frequently been struck in borings, and this territory along the Ohio from Long Bottom to Hartford City, where the coal first rises to day, is very probably all underlaid by this valuable bed. However, as already stated, no shaft should be sunk for it without first proving its presence with the drill, for it may possibly be absent at some localities.

Near the mouth of Skill run, and about six miles below Murraysville, the following Section (24) was taken in descending a steep hill:

1. Massive sandstone from top of knob.....25′
2. *Deep red shale*.....35′
3. Concealed red shale.....30′
4. Sandstone, massive.....20′
5. Concealed.....15′
6. *Red shale*.....10′
7. Shale, gray, sandy..... 5′
8. Sandstone, massive..... 5′
9. Sandy shales and concealed.....70′
10. *Red shale*.....10′
11. Sandstone, flaggy.....25′
12. Sandstones, coarse, yellowish-gray, micaceous, pebbly near base, (Waynesburg).....30′
13. Concealed to low water in the Ohio river.....70′

Total.....350′

This section all belongs to the *Permian* or *Permo-Carboniferous series*, except the basal member, No. 13, which comes in the *Upper Coal measures*, and thus the horizon of the *Pittsburg bed* would be not far from 200′ below the river at this point, though whether it be present in a workable vein, or otherwise, nothing but the drill can determine.

As we pass south from the vicinity of the last section the rocks dip under the river and the *Waynesburg sandstone* approaches water level, so that at Ravenswood, 6 miles below the mouth of Skill run, that stratum floors the bed of the Ohio.

Just opposite Ravenswood, and about 40′ above the Ohio river, an attempt has been made to open a coal mine. No coal was seen at the drift, but it was reported to us that a bed of coal one and a half foot thick was encountered a few feet from the mouth of the entry on the top of a thin bed of fire-clay. This would be the representative of the *Washington coal*, and would show that the *Pittsburg coal* horizon underlies the Ohio river at Ravenswood at a depth of not less than 300 feet.

A limestone is reported as occuring in the summits of the hills one mile east from Ravenswood, and at an elevation of 350′-400′ above the Ohio. This would most probably be *Limestone X*, which we found in the summits of the hills at New Martinsville, and 750′ above the *Pittsburg coal.*

This latter coal seems to be present here as a valuable bed, if the reports of a boring made for oil, one mile below Ravenswood can be relied upon; since in this well a bed of coal, 7′ thick, was reported at a depth of 300′, the mouth of the well being on the river bank about 30 feet above the water.

Two miles below Ripley Landing, and about 9 miles below Ravenswood, the following succession (Sec. 25) was observed in descending a steep hill on the W. Va. side of the Ohio:

1.	Concealed from top of knob	20′
2.	Sandstone, making bluff	19′
3.	Sandy shales and concealed	50′
4.	Red shales, mostly with sandstone at base	40′
5.	Concealed	35′
6.	Sandstone, and sandy shales	25′
7.	Concealed	15′
8.	Flaggy sandstone and concealed	30′
9.	Sandstone and shales	20′
10.	Concealed	20′
11.	Flaggy sandstone	10′
12.	Concealed to low water in Ohio river	45′
	Total	320′

This section is near the middle of the great southward bend which the Ohio river makes between Murraysville and Pomeroy, and only one mile above Letart Falls. Unfortunately the section here gives no information as to the geological horizon of the rocks along the river, but it seems most probable that the *Waynesburg sandstone* is at or below water level, since the rapids at Letart Falls appear to be due to the emergence of this massive sandstone from the bed of the Ohio just as that river turns northward after its long sweep to the south. If this identification of the Letart Falls sandstone with the *Washington bed* be correct, it would follow that the horizon of the

Pittsburg coal must be 250′—300′ below the Ohio in the centre of the great bend in that stream near Letart Falls.

From this last locality (Letart Falls) the Ohio river flows nearly due north, and, as a result, the rocks rise rapidly from beneath its bed, bringing the *Pittsburg coal* up to within 130′ of the surface of the river at Antique, opposite the mouth of West Creek, 6 miles north from Letart Falls.

One mile above Antique the following Section (26) was observed in descending a steep hill to the Ohio river:

1. Red and variegated shale.....30′
2. Sandstone, massive.....20′
3. Red shale and concealed.....30′
4. Coarse, massive pebbly sandstone (Waynesburg).....30′
5. Sandy shales.....10′
6. Concealed.....90′
7. Massive sandstone to low water.....15′

This section would show that the *Pittsburg coal* underlies the river here at a depth of something like 140 feet.

At Antique, Ohio, this coal has long been mined by a shaft 190′ deep, which exhibits the following succession (Sec. 27) as given by the late Prof. E. B. Andrews, in his report on Meigs county, Ohio survey, vol. 1, page 258:

1. Top of shaft to low water of Ohio river.....62′
2. From low water to top of heavy sand-rock.....50′
3. Heavy sand-rock, (Pittsburg sandstone).....70′
4. Shale with coal plants.....10′
5. *Coal*, Pittsburg or Pomeroy seam.....{Coal .....2′5″ / Slate .....0′1″ / Coal.....3′3″} 5′9″
6. Hard, fine grained sandstone.....12′
7. Fireclay..... 5′

Total.....215′

My measurements here differed somewhat from the above section, but not enough to be of any importance By barometer I got the following in descending the shaft from the base of the hill above. (Sec. 28):

1. Sandstone, massive, pebbly, *Waynesburg*..... 40′
2. Concealed..... 60′
3. Concealed in shaft to low water in Ohio..... 70′
4. Interval to coal..... 110′
5. *Coal, Pittsburg*.....{Coal.....2′6″ / Slate .....0′2″ / Coal.....3′0″} 5′8″

Total..... 286′

The employes at the coal works told us that the shaft was 190′ deep to a point which passes 5′ below the base of the coal, and as our barometric measurement agrees exactly with this statement, it seems probable that Prof. Andrews' section makes the coal a few feet further below river level than it should be. By his section the in-

terval from the *Waynesburg sandstone* to the *Pittsburg coal* is 252′, and by mine 240′; so the difference is only 12 feet.

The coal at this locality is of very fair quality, coming out in large, solid blocks which exhibit only a small quantity of pyrites.

The bluish shales which form the roof of the seam contain some beautiful *fossil ferns*, among which *Neuropteris hirsuta*, *N. Loschii*, *N. auriculata*, *Pecopteris arborescens*, and *P. dentata* are most abundant.

This is the first locality on the Ohio river below Pipe Creek (Sec. 4), 160 miles above Antique, where the *Pittsburg coal* has been mined, though as our sections, Nos 5–25, have shown, there are numerous localities at which it could be reached, if present, with shafts of moderate depths, there being only a few spots where the depth would exceed 300 feet.

An interesting fact shown by the last section is that the interval from the base of the *Waynesburg sandstone* to the *Pittsburg coal* has the same thickness (240–250 feet) here as at Wheeling, Pipe Creek and other points along the upper Ohio, though the several *coal beds* (*Waynesburg*, *Sewickley* and *Redstone*) there represented have disappeared entirely from the Upper Coal measures at Antique. These sections also establish another interesting point, viz: that the massive, pebbly sandstone which rises from the bed of the Ohio a short distance below Parkersburg, and which, with but slight interruptions, we traced from that point to Antique, where it appears as No. 1 of Sec. 28, was correctly identified as the *Waynesburg sandstone*.

About one mile below Syracuse and 6 miles below Antique the *Pittsburg coal* rises above the water level on the West Virginia side of the river, and in descending a steep hill there the following (Sec. 29) succession was observed:

1.	Sandstone, quite massive, *Waynesburg*	45′
2.	*Red Shale*	10′
3.	Gray shale	5′
4.	Sandstone	6′
5.	Shales, brown, sandy	10′
6.	*Red shale*	2′
7.	Concealed, with red shale containing limestone nodules near base	24′
8.	Sandstone, flaggy at top, massive below	20′
9.	Variegated shale, with some limestone nodules	28′
10.	Concealed, with red shale at base	25′
11.	Concealed	20′
12.	Red shale	15′
13.	Sandstone, massive, coarse, *Pittsburg*	70′
14.	Gray, sandy shales containing fossil plants	15′
15.	*Coal, Pittsburg*	5′6″
16.	Fireclay and shale filled with fossil plants	2′
17.	Concealed to low water in Ohio river	7′
	Total	310′

The *Pittsburg sandstone* is very massive in this vicinity and makes a great cliff along the hills on either side of the river. It is quite coarse and even pebbly in some portions.

The *Pittsburg coal* is well exposed along the water's edge, and, excepting 6 inches of slaty coal at the top, seems to be good coal throughout.

Just below the locality of this section, at Hartford City and other neighboring towns, salt has been manufactured on an extensive scale. The salt well borings begin at the horizon of the *Pittsburg coal*, and salt water is obtained at a depth of 1,125–1,150 feet. Mr. G. W. Moredock, who operated one of the largest salt manufactories, gave me the following particulars concerning the rocks passed through in the borings:

"For the first 450 feet, a succession of red shales, sandstones, and marly beds with some lime; then comes a coal bed 5′ 6″ to 7′ thick; interval rocks 150 feet; coal bed, pitchy, like asphaltum, 2′; interval 100 feet; coal bed 7′ to 8′ thick; sandstones and shales 375′–400′; *salt rock*, a very pebbly, loose sandstone 40′ to 60′ thick; limestone to bottom of drill holes, 15′. Some oil is found at 400′; the salt water occurs throughout the *salt rock*, but the wells are always drilled through it and 10′ to 15′ into the limestone below, so that the water is pumped up from the bottom of the pebbly rock, as there seems to be much more water at the line of contact between the *salt rock* and the limestone than at any horizon in the former."

From the foregoing statement it would seem most probable that the salt bearing stratum is the basal member of the *Pottsville conglomerate* (No. XII); for the *limestone* reported from the bottom of the wells must be the top of No. XI, or the *Mountain limestone*. How much of this interval of 1,150′ belongs to No. XII cannot be precisely known, though it is most probable that the last 300′, at least, belongs to that series and possibly 400′, since only 100 miles distant, on New River, W. Va., the *Conglomerate series* is 1,200′ thick, or more than the entire interval (1,150′) of the *Barrens* (*XIV*), *Lower Coal measures* (*XIII*), and *Conglomerate* (*XII*), at Hartford City.

Below this latter town, the Pittsburg coal gets higher above the river, and, as is well known, has long been mined extensively in the vicinity of Pomeroy and for some distance further down the Ohio; but when this strata turns southward, below Pomeroy, the broad terrace deposits on the West Virginia side of the river cover up the horizon of the *Pittsburg coal*, and that, at the same time, seems to thin away to an insignificant bed, only 1′6″–2′ thick, since below the mouth of Leading Creek, 5 miles from Pomeroy, no mines of any importance are found in the river hills, which there recede to a considerable distance from the stream.

In the vicinity of Point Pleasant, at the mouth of the Great Ka-

nawha river, a bed of coal, 2′ 3″ thick, has been opened at 80′–100′ above low water; this seems to represent the *Pitisburg bed.*

The following section (30) was taken in descending Point Pleasant hill to Crooked Creek, a short distance above the mouth of the latter:

1. Concealed from top of knob..... 10′
2. Sandstone, massive..... 25′
3. Concealed.....100′
4. Sandstone, massive, upper half gray, coarse, pebbly, lower half blue, rather fine grained quarry rock..... 60′
5. Concealed..... 15′
6. Shale, marly and purplish, with small limestone nodules..... 5′
7. Concealed and flaggy sandstone ..... 55′
8. Fireclay with appearance of *coal*..... 2′
9. Concealed to low water in Ohio river..... 50′

The locality where the 2′ 3″ coal bed was opened was not seen by us in the vicinity of Point Pleasant, but I was informed that it was directly below the massive sandstone, No. 4 of the section; if this be true, then the latter would represent the *Pittsburg sandstone*, and the coal would belong in the concealed interval No. 5, while No. 8 would represent the small coal bed (probably Little Pittsburg), which Prof. Andrews reports as occurring in Gallia county, Ohio, at 50′–60′ below the *Pittsburg coal.*

SECTION OF THE NEW RIVER COAL SERIES, NO. XII, AT SEWELL STATION, ON THE C. & O. R. R.

Owing to the interference of rainy weather during the class excursion of 1883 through the Kanawha valley, only a limited time could be given to the study of the New river coals. The one section measured, however, proved so important that its early publication is desirable, since it seems to show that the *Quinnimont coal seam*, or at least one coming near its place in the series, is persistent down the New river as far as Sewell (19 miles by river from Quinnimont), and hence may reasonably be expected to occur much farther northward, possibly until its horizon sinks below the bed of New River. Should this inference prove true, the measurement is about to be given will be of value in exploring for the *Quinnimont seam*, where its horizon is covered up under a great thickness of talus and other trash, as it must be where the line of outcrop approaches nearer the level of New River northward from Sewell.

The following section was obtained in descending along the "incline" of the Longdale Coal Co., just above Sewell Station:

1. *Coal*, the one mined along New river from Sewell to Hawk's Nest, usually known as the "Nuttallburg seam"	2′–5′	
2. Concealed	85′	335′
3. Sandstone, massive	40′	
4. Concealed, sandstone and shales	210′	
5. *Coal*, Quinnimont	2′6″	
6. Fireclay, impure	5′	642′
7. Shales and sandy beds	65′	
8. *Black slate*	2′	
9. Shales	15′	
10. Sandstone, massive, gray	25′	
11. Sandstone, sandy shales and concealed	200′	
12. Massive sandstone, visible	15′	
13. Concealed, sandy shales and sandstone	250′	
14. Concealed to level of New river	65′	
Total	982′	

The coal, No. 5, which is identified in the above section with the *Quinnimont bed*, has been strangely overlooked by the Sewell Co. since its outcrop is plainly visible in the cut along their incline to the upper or *Nuttallburg seam*. It is also of workable thickness and as good coal as the one mined, if not better, judged by the aspect of its blossom.

No. 5 is the coal which is mined at Fire Creek, above Sewell, and it is also soon to be mined at another locality near Sewell.

That this bed is identical with the *Quinnimont seam* appears evident from the following considerations :

The top of No. XI, or the *Mauch Chunk shales*, must be near the base of the above section, or the bed of New River, since the *Nuttalburg coal*, No. 1, comes not less than 300 feet below the top of No. XII, and this added to the 982 feet of the section would give 1,285′ for the thickness of XII at Nuttalburg, which is as thick as any one has yet claimed for this series on New River. (Prof. Fontaine makes it 1200′).

The relation of the *Quinnimont coal* to the base of No. XII is shown by the following section, which I took there last year in company with the University class of 1882 :

1. Dark slate and shales	10′	
2. *Coal*, *Quinnimont*	2′-4½′	
3. Concealed with a *coal* reported at 60′ below Quinnimont bed	260′	620′
4. Sandstone, massive	25′	
5. Concealed	60′	
6. Sandstone, massive	25′	
7. Concealed and flaggy sandstone	200′	
8. Sandstone, massive, pebbly, base of XII	50′	

No. XI., Greenbriar shales, etc.

9.	Red shale, top of XI or Mauch Chunk	40′	390′
10.	Shales, red, green and variegated	120′	
11.	Sandstone, massive, greenish	20′	
12.	Drab shales	140′	
13.	*Limestone*, sandy	5′	
14.	Concealed to level of New River	65′	
	Total	1,025′	

By comparing this section with the previous one, it will be seen that the horizon of the *Quinnimont coal* comes at the same interval (620′) above the base of No. XII that the lower coal bed at Sewell does above New river there, and since, for reasons already given, the New river's bed must be near the top of No. XI at Sewell, it follows that coal No. 5 of the Sewell section must be identical with the *Quinnimont seam.*

The limestone No. 13 of the last section is one of the impure beds which nearly always occur at some distance above the main mass of the Mountain or Greenbriar limestone.

Mr. Jas. F. Lewis, Supt. of the Quinnimont furnace, had an analysis of this limestone made to learn if it was sufficiently pure for use as a flux at the furnace. The result was unsatisfactory, as will be seen by the following analysis, for a copy of which I am indebted to Mr. Lewis:

Carbonate of lime	71.51
Silica	22.74
Oxides of iron and alumina	3.76
Magnesia	1.66
Phosphoric acid	0.066

Analysis by Dr. Thos. M. Drown, of Easton, Pa.

EVIDENCES OF A GREAT ANCIENT GLACIAL LAKE IN WEST VIRGINIA.

Among the papers read before the geological section at the recent meeting, at Minneapolis, of the American Association for the Advancement of Science, was the following by Prof. I. C. White, of the University of West Virginia, on the old *Glacial Dam* at Cincinnati and the evidences of the West Virginia portion of the vast lake made by that dam.

"In a paper read before the Boston Society of Natural History, March 7, 1883, Rev. G. F. Wright has shown that the southern rim of the great northern ice sheet, crossed the Ohio River near the site of New Richmond, a few miles above Cincinnati. Mr. Wright be-

lieves that one effect of this invasion of the Ohio Valley by the glacial ice, was to form an immense dam of ice and morainic debris 500 or 600 feet high, which effectually closed the old channel way, and set back the water of the Ohio and its tributaries until rising to the level of the Licking River divide, it probably found an outlet through Kentucky around the glacial dam. As this divide is 500 or 600 feet higher than the present bed of the Ohio at Cincinnati, Mr. Wright states that the site of Pittsburg would have been submerged to the depth of 300 feet, and adds: It remains to be seen how much light this may shed upon the terraces which mark the Ohio and its tributaries in Western Pennsylvania."

Having resided for nearly a score of years in the valley of the Monongahela River, the writer is necessarily familiar with its terraces and surface deposits in general; and in reply to the above query of the eminent glacialist, would answer that his admirable work throws a flood of light upon the Monongahela terraces, and proffers for them and the deposits along other tributaries of the Ohio, the only satisfactory explanation that has ever been advanced.

Of course, if the Ohio River was ever so obstructed for any considerable period of time, it would follow, as a necessary result, that many of the tributary streams and the Ohio itself above the limit of the dam would have their old valleys silted up with vast heaps of trash—clay, sand, gravel, boulders, drifted logs and other rubbish—carried down by the streams from the region not sheeted with ice, and dumped into the great inland lake stream which extended from Cincinnati far up toward the sources of the Monongahela.

That the valley of the latter stream has been refilled with trash during some period of its history to a height of 250 or 300 feet above its present bed, the evidence is most conclusive, for the remnants of this deposit still cover the surface to a great depth in long lines of terraces extending from Pittsburg, Pa., southward along the river to Fairmont, W. Va., a distance of 130 miles, and very probably much further, as I have never examined the river valley above the latter town.

The striking peculiarity of these terrace deposits is that they suddenly disappear at an elevation of 1,050 or 1,075 feet above tide, not a single rounded and transported boulder ever being found above the latter horizon, though occurring in countless numbers below this level.

The hills along the river often rise 300 or 400 feet higher than the upper limit of the deposits, so that there can be no mistake about the elevation at which the terrace deposits disappear. The composition of these great heaps of surface debris is, along the immediate valley of the river, a heterogeneous mixture of sand, clay, gravel, rounded boulders of sandstone of every size, from an inch in diameter up to four feet, pieces of coal, leaves, logs of wood, and every other species of rubbish usually transported by streams. Back from the channel

of the river, however, and especially where the surface configuration would make quiet water, there occur thick deposits of very fine, bluish white clay, in which great numbers of leaves are most beautifully preserved. These clays have been extensively used for the manufacture of pottery at Geneva and Greensboro, Pa., and also to some extent at Morgantown and Fairmont, W. Va. Though the clay deposits occur at nearly every horizon, they are purest near the upper limit of the terraces, and these are consequently the only ones that have hitherto been much explored.

In the vicinity of Morgantown, terraces of transported material occur at the following approximate (measured by barometer) elevations:

	Ft. above river.	Ft. above tide.
First terrace	30	820
Second terrace	75	865
Third terrace	175	965
Fourth terrace	200	990
Fifth terrace	275	1065

The accompanying cross section of the Monongahela valley, near Morgantown, exhibits the relations of the terrace deposits to each other and to the river channel.

The first terrace is the present flood plain of the river, consisting principally of fine sand, mud and gravel. It seems to possess some respectable antiquity, however, since Mr. Walter Hough, one of my students, dug some teeth and bones from five feet below its top, which were identified by Prof. O. C. Marsh, as the remains of a species of peccary, an animal that has not inhabited the region in question within the American historic epoch.

All of the other terraces have thick deposits of transported material wherever the original contour of the surface has favored its presentation from erosion. From the top of the fourth terrace Mr. Keck dug a well through 70 feet of clay, gravel and boulders without finding bed rock. He also encountered logs of wood in a soft or semi-rotten condition near the bottom.

Many other wells on the third terrace have been sunk to depths of 20 and 30 feet without reaching bed rock.

The fifth terrace of this Morgantown series marks the height to which the pre-glacial valley of the Monongahela was silted up, partially or entirely during the existence of the glacial dam at Cincinnati, since, as already stated, no clay beds, rounded boulders or other transported material are ever found above its top, but instead only angular fragments of the country rock, and thin coverings of surface material which has accumulated *in situ*.

Owing to the considerable elevation—275 feet—of the fifth terrace above the present river bed, its deposits are frequently found far inland from the Monongahela, on tributary streams. A very extensive deposit of this kind occurs on a tributary one mile and a half

northeast of Morgantown, and the region, which includes three or four square miles, is significantly known as the "flats." The elevation of the "flats" is 275 feet above the river or 1065 feet above tide. The deposits on this area consist almost entirely of clays and fine sandy material, there being very few boulders intermingled. The depth of the deposit is unknown, since a well sunk on the land of Mr. Baker passed through alternate beds of clay, fine sand and muddy trash to a depth of 65 feet without reaching bed rock. In some portions of the clays which make up this deposit, the leaves of our common forest trees are found most beautifully preserved. Whether or not they show any variations from the species growing in that region, the writer has not yet had time to determine, but when a larger collection has been obtained, this subject will receive the attention that it deserves, since if the date of the glacial epoch be very remote, the species must necessarily show some divergence from the present flora.

Of animal remains the only fragment yet discovered in this highest of the terraces is the tooth of a mastodon, dug up near Stewartstown, seven miles northeast from Morgantown.

The other tributaries of the Monongahela, on which the writer has noted the clay and other deposits of the fifth terrace, are Decker, Dunkard, Whitely, Muddy and Ten Mile Creeks, and in each case the deposits disappear at the same absolute level at which they cease along the river.

The Great Kanawha River, another principal tributary of the Ohio, draining a region that was never glaciated, also exhibits water-worn boulder deposits which disappear at 200–300 feet above the present level of that stream, though I have not determined the exact limit.

The glacial dam at Cincinnati presents a complete explanation for the origin of Teazes Valley, an ancient, deserted river channel 20 miles long and one or two miles wide, which leaves the Great Kanawha 15 miles below Charleston, W. Va., at Scary, and passing through Putnam and Cabell Counties, extends to the valley of Mud River, a tributary of the Guyandotte, which empties into the Ohio at Huntington.

This valley, although having an elevation of 200 feet or more above the Kanawha, is filled to a great depth with rounded boulders of sandstone, chert, cannel coal, and other trash which has plainly been transported down the Kanawha from above Charleston, so that although it was clearly seen that the water of the Kanawha had once found an outlet to the Ohio by way of this valley and the Mud and Guyandotte Rivers, yet why this ancient channel should have been abandoned for the present much more circuitous one had always remained a mystery until Mr. Wright furnished the key in his discovery of the great ice dam at Cincinnati. For it is now clear that such a barrier would set back the water of the Kanawha until rising

above the divide which had previously separated it from Mud River, it sent an arm across to the Ohio by way of the Guyandotte, 50 miles below where the other arm and main stream reached the same river at the present mouth of the Kanawha, thus converting portions of Putnam, Mason and Cabell Counties into a large triangular island, the base of which was formed by the swollen Ohio, and the sides by the two arms of the Great Kanawha. The melting away of the Cincinnati dam withdrew the water from the western or Mud-Guyanotte arm of the Kanawha, leaving the abandoned valley high and dry, but littered up with transported trash as we now see it, while the Kanawha continued on to the Ohio in its present and pre-glacial outlet.

A summary view of these and other facts in the writer's possession seem to prove, beyond any reasonable doubt, that Mr. Wright's hypothesis concerning the daming up of the Ohio by the glacial ice in the region of Cincinnati was an actual reality; that during the period of its continuance the principal tributaries of the Ohio had their valleys filled with sediment carried down and dumped into them by the mountain torrents, and other streams which drained the area south from the glaciated region; that subsequently, when the barrier disappeared, the rivers recut their channels through the silt deposits, probably by spasmodic lowering of the dam, in such a manner as to leave the deposits in a series of more or less regular terraces which in favored localities subsequent erosion has failed to obliterate, though from steep slopes it has removed their every trace.

The elevation of this dam at Cincinnati, as determined from the upper limit of the fifth Monongahela River terrace, would be somewhere between 1050 feet and 1075 feet above tide, or about 625 feet above low water there in the present Ohio.

CATALOGUE

—OF—

WEST VIRGINIA

UNIVERSITY

MORGANTOWN,

FOR THE YEAR 1884-5.

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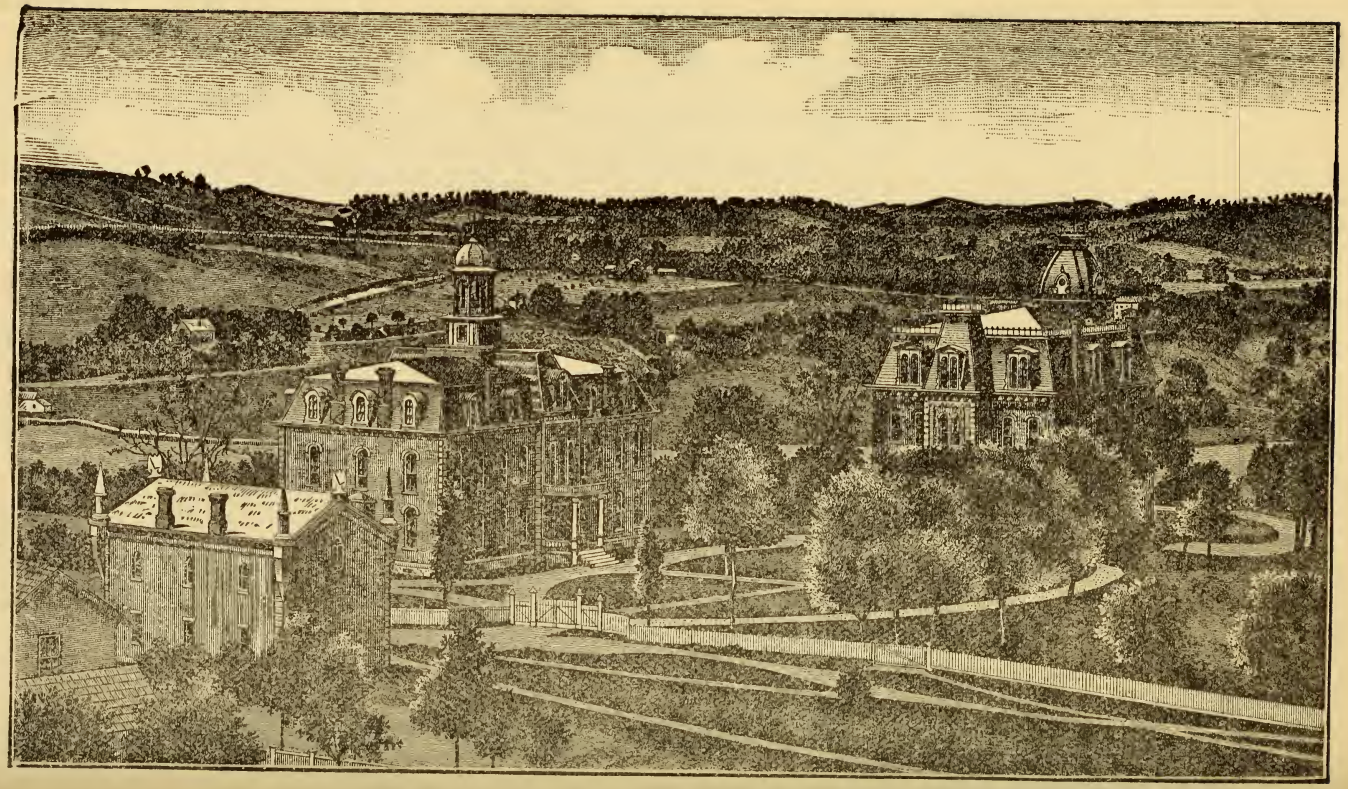

WEST VIRGINIA UNIVERSITY.

Calendar.

The University year includes forty-one weeks, and is divided into three terms.

The First Term begins on the first Wednesday of September, the second on the fourth Wednesday of November, and the third on the second Wednesday of March.

The Annual Commencement is on the second Thursday of June.

Prompt attendance at the beginning of each term is very important to the student.

1885.

June 7th—Sunday, 11 a. m.—Baccalaureate Sermon.

10th—Wednesday, 8 p. m.—Regents' Prize Contest.

11th—Thursday, 9 a. m.—Commencement; 2 p. m.—Anniversary of West Virginia Historical Society; 8 p. m.—Address to the Literary Societies by Rev. A. C. Hurst, D. D. of Pittsburg, Pa.

September 1st—Tuesday—Examination of Candidates for admission.

September 2d—Wednesday—Session 1885–6 begins.

November 25th—Winter Term begins.

March 19th—Spring Term begins.

June 10—Commencement.

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11	JOSEPH MORELAND,	Morgantown.
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Some changes in the Faculty occurred during the annual session of the Regents in June, 1885. The Board of Instruction as now constituted, is set forth below.

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ABBREVIATIONS.

Met.--Metaphysics. Ma.—Mathematics. A. L.—Ancient Languages. M. L —Modern Languages. E.—English. H.—History. A.—Agriculture. Chem.—Chemistry. Ph.—Physics. Anat.—Anatomy, Physiology and Hygiene. G.—Geology. B.—Botany. Z.—Zoology. Students still under the former curriculum are designated by their classes. Soph.—For Sophomore. Jr.--Junior. Sen.—Senior. Class.—Classical. Sci.—Scientific. Those who also have studies in the Preparatory Department—P.

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Armstrong, R., Putnam county. Met., E., G., H., M. L.
Armstrong, J. V., Jackson county. P.
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Barker, S. A., Monongalia county. E., Law.
Berkeley, W. N., Jr., Monongalia county. A. L., E., M. L., Ph.
Birkett, R. F., Ohio county. Z., H., Ph.
Boyd, George E., Jr., Ohio county. E., H.
Boyd, A. C., Ohio county. P.
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Breakiron, M. D., Monongalia county. P.
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Cobun, S. W., Monongalia county. M. L., P.
Cole, G., Monongalia county. P.
Coogle, H. L., Monongalia county. P.
Corpening, G. B., Harrison county. B., P.
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Cox, I. S., Marion county. E., Anat., Ph., Chem.
Cox, E. W., Cabell county. E., H., P.

Cox, E. M., Monongalia county. P.
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Cutlip, J. E., Braxton county. P.
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Dupuy, A , St. Louis, Mo. Law, P.
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Rector, J. C., Wood county. Ma., P., Ph.
Reed, J. B., Monongalia county. P.
Reed, I. E., Monongalia county. P.
Reynolds, F. C., Mineral county. P.
Robinson, G. P., Baltimore, Md. E., Ma., B., H., M. L.
Romine, A. L., Harrison county. E., Ma., H., Ph.
Ryland, H. H., Monongalia county. E., Ma.
Shepherd, T. R., Bayard, Va. E., Z., Ma., A. L.
Sisler, G. W., Monongalia county. Ma., E.
Smith, H. F., Uniontown, Pa. A. L., Ma., Chem.
Springston, J. P., Ritchie county. Law.
Stoetzer, H. S., Ohio county. E., H., M. L., P.
Strode, E. L., Jefferson county. Anat., H., Z.
Stewart, J. H., Putnam county. Law.
Stewart, R. A., Putnam county. Law.
Stuart, W. S., Doddridge county. Ma., Law.
Sturgis, H. J., Smithfield, Pa. Law.
Swann, L., Tyler county. E., Ma., Met., Z., B., M. L.
Sweeney, J. D., Tyler county. Sci., Sen,, Law.
Tapp, R. W., Monongalia county. Class., Sen.
Turner, G. H., Wood county. M. L., Ma., P.
Van Gilder, G. H., Monongalia county. H., E., M. L.
Waters, N. M., Preston county. Met., Z., Ma., A. L., M. L., Chem.
White, W. J., Monongalia county. E., A. L., Ma., P.
Wilson, B. C., Kanawha county. M. L., Ma., Law.
Wilson, T. M., Monongalia county. E., A. L., Ma., Chem.
Wirgman, C. T., Hampshire county. E., H., P.
Wolfe, H. N., Harrison county. P.
Yost, Z. F., Marion county. Ma., Met., Z., B., E., M. L., Ph.
Yost, L. H., Marion county. H., P.

Preparatory Students.

Alexander, G. M.....Monongalia county.
Armstrong, J. V.....Jackson county.
Bacchus, E. R.....Harrison county.
Barker, S. A.....Monongalia county.
Boyd, A. C.....Ohio county.
Brown, J. E.....Monongalia county.
Breakiron, M. D.....Monongalia county.
Cobun, S. W.....Monongalia county.
Cole, G.....Monongalia county.
Coogle, H. L.....Morgantown.
Corpening, G. B.....Harrison county.
Cox, J. D.....Marion county.
Cox, E. W.....Cabell county.
Cox, E. M.....Monongalia county.
Cutlip, J. E.....Braxton county.
Dolan, T. A.....Wood county.
Dupuy, A.....St. Louis, Mo.
Echart, T. L.....Monongalia county.
English, L. S.....Mason county.
Finnell, C. N.....Morgantown.
Freeland, P. L.....Wetzel county.
Hall, G. M.....Monongalia county.
Hall, J. S.....Monongalia county.
Hartmeyer, C.....Preston county.
Haught, F. T.....Monongalia county.
Hayes, U. S. G.....Barbour county.
Heiner, G. G.....Arizona Ter.
Henshaw, W. T.....Berkeley county.
Hite, B. H.....Morgantown.
Hough, F. C.....Morgantown.
Hooff, F. B.....Jefferson county.
Houston, W. H.....Monongalia county.
Jemison, D. L.....Monongalia county.
Johnson, J. W.....Morgantown.
Keener, G. I.....Morgantown.

Kidd, G.	Jackson county.
Kirkhart, J. A.	Monongalia county.
Lazzell, J. E.	Monongalia county.
Long, G. T.	Monongalia county.
Martin, T	Taylor county.
McClarnan, J. H.	Monongalia county.
Melvin, W. J.	Jefferson county.
Miller, E. L.	Monongalia county.
Moore, J. H.	Barbour county.
Musgrave, E. C.	Mason county.
Prickett, W. C.	Marion county.
Rector, J. C.	Wood county.
Reed, J. B.	Monongalia county.
Reed, I. E.	Monongalia county.
Reynolds, F. C.	Mineral county.
Romine, A. L.	Harrison county.
Ryland, H. H.	Monongalia county.
Sisler, G. W.	Monongalia county.
Springston, J. P.	Ritchie county.
Stoetzer, H. S.	Ohio county.
Strode, E. L	Jefferson county.
Turner, G. H.	Wood county.
Van Gilder, G. H.	Morgantown.
White, W. J.	Monongalia county.
Wilson, B. C.	Kanawha county.
Wirgman, C. T.	Hampshire county.
Wolfe, H. N.	Harrison county.
Yost, L. H.	Marion county.

NOTE.—Many of the foegoing list have one or more studies in the University Departments.

Number in the Several Schools.

Agriculture	1
Chemistry	13
Physics	13
Anatomy, Physiology and Hygiene	5
Zoology	14
Geology	6
Botany	20
English	36
Metaphysics	15
Mathematics	36
Latin	14
Greek	12
French	9
German	22
History	22
Law and Equity	14
Preparatory Department	32
Some Study in Preparatory Department	63

Recapitulation.

BY COUNTIES IN WEST VIRGINIA.

Barbour	2
Berkeley	2
Braxton	1
Cabell	1
Doddridge	1
Gilmer	2
Hampshire	1
Harrison	6
Jefferson	3
Jackson	2
Kanawha	1
Marion	6
Mason	3
Mineral	1
Monongalia	41
Monroe	1
Ohio	4
Preston	4
Putnam	2
Randolph	1
Ritchie	2
Summers	1
Taylor	1
Tucker	1
Tyler	2
Upshur	1
Wood	5
Wetzel	1
Total	99

RECAPITULATION BY STATES.

West Virginia	99
Pennsylvania	4
Maryland	1
Missouri	1
Virginia	1
Arizona Territory	1
Total	107

Number of Students Each Year.

The following is an exhibit of the number of students enrolled annually from the beginning:

The year 1867–8, shows a total of 124.
The year 1868–9, shows a total of 154.
The year 1869–70, shows a total of 161.
The year 1870–1, shows a total of 166.
The year 1871–2, shows a total of 159.
The year 1872–3, shows a total of 144.
The year 1873–4, shows a total of 138.
The year 1874–5, shows a total of 125.
The year 1875–6, shows a total of 96.
The year 1876–7, shows a total of 93.
The year 1877–8, shows a total of 118.
The year 1878–9, shows a total of 135.
The year 1879–80, shows a total of 132.
The year 1880–1, shows a total of 162.
The year 1881–2, shows a total of 177.
The year 1882–3, shows a total of 159.
The year 1883–4, shows a total of 96.
The present year shows a total of 107.

Vocal Music.

D. B. PURINTON, A. M., Instructor.

The Course of Instruction embraces one year, as follows:

FALL TERM—Rudiments and Elementary Practice.

WINTER TERM—Rudiments Continued, Glee and Chorus Singing.

SPRING TERM—Lectures on Harmony and Composition. Theory of Music and Musical Form, with original exercises in Harmony and Composition.

STUDENTS, 1884—5.

Alexander, G. M.	Heiner, G. G.
Birkett, R. F.	Helmick, M. D.
Boyd, G. E., Jr.	Jemison, D. L.
Cox, E. W.	Musgrave, D. C.
Finnell, C. N.	Ryland, H. H.
Hartmeyer, C.	Sturgis, J. H.
Haught, F. T.	Wingman, C. T.

UNIVERSITY GLEE CLUB.

F. T. Haught.....First Tenor.
A. B. Bush.....First Tenor.
Walter Hough.....Second Tenor.
J. P. Springston.....Second Tenor.
J. L. Gregg.....First Bass.
W. T. Lively.....First Bass.
R. A. Armstrong.....Second Bass.
E. S. Elliott.....Second Bass.

Degrees and Certificates.

The following Degrees were conferred at the last Commencement:

MASTERS OF ARTS.

Thomas E. Hodges, William M. Hyland, Howard N. Ogden.

BACHELORS OF ARTS.

R. C. Berkeley, Jr., W. H. Michael, H. L. Robinson.

BACHELOR OF SCIENCE.

W. T. W. Barb.

BACHELORS OF LAW.

Meigs Bland, Lewis county.
W. T. Bland, Lewis county.
J. F. Corke, Harrison county.
I. G. Lazzell, Monongalia county.
B. S. Morgan, Monongalia county.

GRADUATES IN SCHOOLS.

CHEMISTRY.

W. N. Berkeley, Jr., Aug. Ruffner, E. W. Lawson,
R. Workman.

FRENCH.

E. W. Lawson, B. W. Meadows, H. L. Robinson.

GEOLOGY.

R. C. Berkeley, Jr.

ENGLISH.

N. D. Adams, R. C. Berkeley, Jr., A. B. Bush.
E. W. Lawson, B. W. Meadows.

METAPHYSICS AND HISTORY.

N. D. Adams, E. H. Anderson, W. T. W. Barb,
R. C. Berkeley, Jr., Harvey Fleming, B. W. Meadows,
Walter H. Michael, H. L. Robinson.

MATHEMATICS.

A. B. Bush, John D. Sweeney.

PHYSICS.

R. A. Armstrong, Thomas G. Rector.

PROFICIENTS.

ANATOMY, PHYSIOLOGY AND HYGIENE.

R. Workman.

PHYSIOLOGY AND HYGIENE.

I. S. Cox, F. T. Haught.

PHYSICS

J. E. Charles, C. P. Grady.

HISTORY.

John D. Sweeney.

CERTIFICATES OF PROMOTION.

FRENCH.

N. D. Adams, R. A. Armstrong, A. B. Bush,
T. G. Rector, R. W. Tapp.

GERMAN.

R. A. Armstrong, W. T. W. Barb, B. W. Meadows,
W. H. Michael, H. L. Robinson, Leroy Swann,
J. D. Sweeney.

JUNIOR GREEK.

R. W. Dawson. N. M. Waters.

INTERMEDIATE GREEK.

N. D. Adams, A. B. Bush, W. N. Berkeley, Jr.,
T. R. Shepherd.

JUNIOR LATIN.

R. A. Armstrong, N. M. Waters.

INTERMEDIATE LATIN.

W. N. Berkeley, Jr., R. W. Dawson, T. R. Shepherd.

JUNIOR MATHEMATICS.

J. E. Charles, Thomas G. Rector, Augustus Ruffner,
Enoch Rector, A. L. Romine, T. R. Shepherd,
H. F. Smith, Leroy Swann.

INTERMEDIATE MATHEMATICS.

W. N. Berkeley, Jr., R. W. Dawson, B. W. Meadows.

JUNIOR ENGLISH.

R. A. Armstrong, J. D. Cox, R. W. Dawson,
D. L. Jemison, F. Lively, H. C. Ogden,
T. G. Rector, A. L. Romine, T. R. Shepherd,
N. M. Waters,

Course of Study.

The course of study is distributed into ten independent Schools, of which eight are Academic and two Professional. The object of this distribution is to allow greater freedom in the selection of studies and to elevate the standard of instruction and attainment.

But while the course is elective, the Faculty will advise students as to the choice and arrangement of their studies, and always encourage a complete and regular course.

Each student in the Academic Schools is required to attend at least three classes or twelve recitations per week, and to adhere throughout the session to the studies selected on his matriculation, unless the Faculty, for cause shown, allow him to attend a less number or to make an exchange.

Students will be classed in the several schools, according to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

The advantages to the student, of the elective system, are that he may pursue the studies of any School for which he is prepared, without regard to his deficiency in other studies; that he receives his Diplomas in the several Schools in the order in which he completes them; that if he is able or desires to take but a partial course, he may adapt that course to his tastes or his necessities in life; and that he is put upon a footing of social equality with his fellows, and thrown upon his individual efforts, as will soon happen in actual life, for success and distinction in academic study.

The Academic Schools are as follows:

I. Ancient Languages.
II. Modern Languages.
III. English.
IV. Geology and Natural History.
V. Mathematics.
VI. Agriculture, Physics and General and Applied Chemistry.
VII. Metaphysics.
VIII. History.

The Professional Schools are:

I. Law and Equity.
II. Anatomy, Physiology and Hygiene.

Announcements

OF THE

INDIVIDUAL PROFESSORS.

ACADEMIC SCHOOLS.

I.—SCHOOL OF ANCIENT LANGUAGES.

PROF. BERKELEY.

The subjects taught in this class will be:

I. The Latin Language and Literature, in which there will be three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used;

1. *Junior Class*—Virgil's Bucolics and Georgics; Horace's Odes and Epodes; Cicero de Senectute and De Amicitia, and Gildersleeve's or Allen's Latin Grammar and Exercise Book.

2. *Intermediate Class*—Horace's Satires and Epistles, Livy, Latin Prose Composition and Grammar, and Bender's Roman Literature.

3. *Senior Class*—Cicero de Officiis, Tacitus, and Exercises in Latin Composition. In this class a private course of parallel reading will be prescribed.

Lexicons Recommended for Each Class—White's, Andrews', or Freund's Leverett's

II. The Greek Language and Literature, in which there will be also three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used:

1. *Junior Class*—Herodotus, Homer's Iliad and Odyssey, Greek Prose Composition, and Goodwin's Grammar.

2. *Intermediate Class*—Xenophon's Memorabilia, Plato's Apology and Crito, Greek Prose Composition, Goodwin's Grammar, and Jebb's Greek Literature.

3. *Senior Class*—Eurpides, Demosthenes, Sophocles, and Exercises in Greek Composition. A private course of parallel reading will also be prescribed for this class.

Lexicon for Each Class—Liddell and Scott's. The abriged edition for the Junior Class. The unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

II.—SCHOOL OF MODERN LANGUAGES.

PROF. HARVEY.

In this School are taught French and German. In each language there are two classes, Junior and Senior. The Junior classes are thoroughly drilled in the Etymological forms, and are practiced in the simpler forms of Syntax. The aim in the Senior classes is to give facility and accuracy in translation. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the Senior classes.

While no previous preparation except a fair knowledge of English is required, students are advised to familiarize themselves with the elements of Latin before applying for admission to the lower classes.

Text Books:

Junior French—Languellier and Mosanto's Course; Smith's Reader; Telemachus, Picciola, or selections from modern authors.

Senior French.—Voltaire's Charles XII, Corneille's Cid, Racine's Athalie, Moliere's Misanthrope, Hugo's Hernani, Brachet's Grammar and Saintbury's Literature.

Junior German—Woodbury's Complete Course, Otto's Reader, Schiller's Jungfrau or Wilhelm Tell, or selections from modern authors.

Senior German—Goethe's Iphigenia, Fouque's Undine, Goethe's Hermann and Dorothea, Lessing's Minna von Barnheim, Cook's Grammar and Conant's Literature.

Reference Books:

French—Spiers and Surenne's, Gasc's or Masson's Dictionary; Brachet's Historical, or Wall's Student's Grammar, Van Laun's or Saintbury's Literature.

German—Adler's, Whitneys or Longman's Dictionary, Whitney's or Brandt's Grammar, Hosmer's or Harrison and Gostwick's Literature.

III.—SCHOOL OF ENGLISH.

PROF. LYON.

This School has at present a course of two years, embracing the analysis and history of the language; Rhetoric, Theoretical and Practical; Logic; English Literature, with a critical examination of authors; the Elements of Criticism and Elocution, consisting of practical drill in the elements, cultivation of the voice, reading and declamation.

JUNIOR YEAR.

Analysis and History of the English Language, Rhetoric, English Literature and Elocution.

SENIOR YEAR.

English Literature, Elements of Criticism, and Elocution. Political Economy is also temporarily assigned to this school.

Text Books and References:

Analysis, Greene; Rhetoric, Hill, Campbell, Whately; English Literature, Baldwin, Shaw, Tyler's, Morley; Elements of Criticism, Kames; Elocution, Kidd, Mitchell, Raymond.

Political Economy; Chapin, Wayland, Bowen, Perry, Roscher.

Students entering the Senior year of this school as candidates for a Diploma, must have passed the Junior year of at least three other schools in the University.

IV.—SCHOOL OF GEOLOGY AND NATURAL HISTORY.

PROF. WHITE.

This school includes Botany, Zoology, and Geology, and requires two years for the completion of the course.

FIRST YEAR.

During the first year Botany and Zoology will be studied, and instruction in each will be given thrice every week of the Winter and Spring Terms. In addition to a full theoretical knowledge of these subjects, a stated amount of practical work in analyzing and classifying plants, and in dissecting and skeletonizing animals will be required during the Spring Term.

Text Books:—

Botany---Kellerman's Elements, and Plant Analysis; Sach's and Bessey's for reference

Zoology—Orton, and Romane; for reference, the works of Darwin, Wallace, Mivart, and others.

SECOND YEAR.

Geology will form the subject of study during this year, and instruction in it will be given three times a week from the beginning of the Winter Term until the commencement (about the 7th of May) of the Senior vacation. During this vacation a three weeks' excursion will be made through West Virginia and adjoining States, for the purpose of acquiring a knowledge of Practical Geology, the tracing and identification of minerals, the construction of sections, etc. This excursion (the necessary expenses of which shall never exceed fifty dollars) is open to all who pursue the study of Geology, but is required only of those who expect to graduate in the Scientific Department of the University, or to obtain the Diploma of this school.

Text Book:

Leconte's Elements of Geology. For reference, Dana's Manual, Lyell's Principles, and Geike's Text Book.

V.—SCHOOL OF METAPHYSICS.

PROF. PURINTON.

The course of study embraces Psychology, Logic, Ethics, Natural Theology, and Evidences of Christianity, requiring two years for its completion.

Instruction is given by means of text book recitations, familiar lectures and parallel readings.

Wherever conflicting theories are encountered, the various arguments and their necessary tendencies are presented to the student, and he is encouraged to investigate and judge for himself.

Text Books and Books of Reference:

Junior Year—Psychology and Logic.

Porter's Intellectual Science, Baine's Mental Science, Bascom's Psychology, McCosh's Intuitions, Hamilton's Lectures, Upham's Mental Philosophy, Edwards on the Will, Jevons-Hill's Logic, Mill's, Hamilton's, Coppee's, Atwater's and De Morgan's Logic.

Senior Year--Ethics, Natural Theology and Evidences of Christianity.

Wayland's Moral Science with Ethical works of Baine, Hopkins, Hickok, Dymond & Winslow, Bascom's Natural Theology, Alexander's Evidences of Christianity with Paley, Butler and Paul Janet.

VI.—SCHOOL OF AGRICULTURE, PHYSICS AND CHEMISTRY.

PROF. LATHAM.

Instruction in the several departments of this school is by text books and lectures. Examinations are in writing.

In *Agriculture*, the University authorities have made no provision for practical teaching, and the instructor aims at no more than an exposition of some of the underlying chemical and physiological principles.

In *Physics*, as a necessary preparation for after study, attention is called to a few of the elementary principles of Analytical Mechanics (the full discussion of which belongs to the School of Mathematics), and experimental mechanics is taught as far as the limited supply of mechanical apparatus permits. Afterwards the subjects of Heat, Light, Electricity and Sound are discussed as fully as may be, and the modern doctrines of Molecular Physics are explained.

In *Chemistry*, the subjects presented are the distinctive features of Chemistry, the laws of chemical combination, the origin, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, incidental allusion is made to the application of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account.

VII.—SCHOOL OF HISTORY.

PROF. WILLEY.

History is the study of a lifetime. It cannot be completed in a university course, nor can it be excluded. Every student aspiring to a liberal education, will need to know History, whatever be his vocation in life. But the most that can be attempted in a college course is to lay a good foundation.

The course of instruction is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but the philosophy of history.

The method of instruction is by text books, collateral readings and lectures.

The course of study runs through four terms, giving one term to the divisions of Ancient, Mediæval and Modern History, respectively, and one full term to United States History. The text books are Tytler's Universal History and Ridpath's United States History; with *reference* to Myres' outlines of Ancient History, Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays (first and third series), Arnold's Lectures on Modern History, Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

The course begins regularly with the Fall Term, and it will be more profitable for students, intending to take a full course, to begin at that time.

VIII.—SCHOOL OF MATHEMATICS.

LIEUT. J. L. WILSON, U. S. A.

The school of Mathematics includes studies in Pure and Applied Mathematics, as follows: Algebra, Geometry, Trigonometry (Plane and Spherical), Mensuration, Surveying, Navigation, Analytical Geometry, Differential and Integral Calculus, Mechanics and Astronomy.

The course of instruction consists of three years:

Junior Year—Algebra, Geometry, Trigonometry.

Intermediate Year—Mensuration, Surveying, Navigation, Analytical Geometry, Calculus.

Senior Year—Analytical Mechanics, Astronomy.

Instruction is given by means of lectures, class exercises, and original work by the student. Original problems and practical exercises are required in Trigonometry, Mensuration, Surveying, Topography and Astronomy.

Such useful instruments as the Compass, Transit, Sextant and Telescope are placed in the hands of the student, and ample opportunity is given for becoming acquainted with their proper manipulation and their practical use.

Students are expected to have a good knowledge of Arithmetic, Elementary Algebra, and the first four books of Geometry, before entering this school.

PROFESSIONAL SCHOOLS.

I.—SCHOOL OF LAW AND EQUITY.

PROF. BROOKE.

PROF. WILLEY.

The full course will embrace Common and Statute Law, Mercantile Law, Equity, Evidence, and Constitutional and International Law.

The text books used in the course of Common and Statute Law will be Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, and for *reference* the Code of West Virginia, and the subsequent Acts of the West Virginia Legislature.

In the Branch of Equity, Evidence and Mercantile Law, the books will be Adams' Equity, the first volume of Greenleaf on Evidence, and Smith's Mercantile Law.

These text books will be supplemented by lectures each week, and it will be the endeavor so to incorporate in them the statutory changes in the common law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text book used in Constitutional Law will be the "Foederalist." This, however, will be supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions, will also be the subject of lectures.

The text book used in International Law will be Woolsey's Introduction to the Study of International Law. Each day before the lecture there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the text book as were the subject of the lecture.

Besides the daily examinations, there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing. The degree of Bachelor of Laws will be conferred upon graduates of this school.

II.—SCHOOL OF ANATOMY, PHYSIOLOGY AND HYGIENE.

PROF. ALLEN.

This department has been laboring under certain difficulties since its establishment, which are now being rapidly overcome. The foundation has been laid, and in a few years a museum will be formed of which the State may be proud. During this year this class has been retarded, as were others, to a slight extent.

The aim is to teach Anatomy thoroughly, practically, as well as can be done anywhere. Subjects are provided for dissection for the students.

Physiology and Hygiene are taught, as is Anatomy when practicable, by specimens, the microscope, drawings, lectures, models, etc. The examinations are conducted in writing at the close of the session. Daily examinations, which are oral, are held throughout the term. Text books are Gray's Anatomy, Wilson's Anatomy—Carpenter, Flint, or Dalton's Physiology—and for the present, McSherry, Wilson, &c., in Hygiene.

Members of the class who give evidence at the final examination of successful study will receive CERTIFICATES OF PROFICIENCY in the branches taught.

MILITARY DEPARTMENT.

LIEUT. JAS. L. WILSON, FOURTH U. S. ARTIL'Y.

Under the law of the State, five cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free, but not more than three can be appointed from any one county, and books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them, undoubted evidence of fair moral character.

The following table will show the counties composing the several districts; the names of the Regents for each district are prefixed to this Catalogue:

District I. Hancock, Brooke, Ohio.
District II. Marshall, Wetzel, Marion.
District III. Ritchie, Doddridge, Harrison, Gilmer, Calhoun.
District IV. Tyler, Pleasants, Wood, Wirt.
District V. Mason, Jackson, Roane.
District VI. Putnam, Cabell, Wayne.
District VII. Lincoln, Boone, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII. Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX. Kanawha, Clay, Nicholas, Braxton, Webster.
District X. Lewis, Randolph, Upshur, Barbour, Taylor, Tucker.
District XI. Preston, Monongalia.
District XII. Hampshire, Hardy, Grant, Mineral, Pendleton.
District XIII. Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause. Drill occupies one hour on each of four days in the week. A neat uniform of cadet gray is worn, including a fatigue suit, which may be worn constantly, and is more economical than ordinary citizens' dress. Cadets may keep this in view in bringing clothes with them. Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term. The University has an ample equipment for both infantry and artillery, and is supplied with ammunition by the State.

The annual course in drill for the corps is as follows:

FIRST TERM—*Infantry.*—Schools of the Soldier Company and Battalion, including Bayonet Exercise, Skirmish Drill and Target Practice.

SECOND TERM—*Artillery.*—Manual of the Piece, Manual of the Saber, and Saber Exercise.

THIRD TERM—*Infantry and Artillery.*—Company, Battalion and Skirmish Drills, School of the Battery Dismounted, Guard Duty, Court Martial, Target Practice.

Dress Parades, Reviews, Inspections and Guard Mountings are held at least once a week, except during the Winter term.

A series of lectures on military subjects, including Customs of Service, Organization of Armies, Strategy and Grand Tactics, Military Campaigns, Military Engineering, Heavy Ordnance, Explosive Compounds, Torpedoes, &c., delivered during the year to the members of the corps.

DIPLOMAS AND CERTIFICATES.

I. A CERTIFICATE OF PROMOTION will be given to each student who attains a standing of 7.5 on a scale of 10 for one year's continuous study in Junior or Intermediate classes.

II. A CERTIFICATE OF PROFICIENCY will be awarded for satisfactory attainments in the entire studies of any school, or completed subject therein.

III. A DIPLOMA will be conferred on each student who attains a standing of 7.5 on a scale of 10 during the entire course in any one of the following subjects: Latin, Greek, French, German, Chemistry, Physics, Geology, Natural History, Analytical Chemistry.

IV. A DIPLOMA will be granted to each student who completes the entire course in any academic school with a standing of 7.5 on a scale of 10 in the Senior class or classes thereof.

Students attaining a standing of 6. are allowed to pass from a lower to a higher class.

DEGREES.

The University Degrees are the following:

Bachelor of Sciences, B. S.
Master of Sciences, M. S.
Bachelor of Arts, A. B.
Master of Arts, A. M.
Bachelor of Laws, B. L.

The Degree of Bachelor of Sciences requires: *Diplomas* in the schools of Metaphysics, Modern Languages; English; Geology and Natural History; Agriculture, Chemistry and Physics; Mathematics; *Certificates of Proficiency* in Physiology and Hygiene.

Latin or Greek may take the place of one of the Modern Languages; History or Constitutional and International Law the place of senior English.

The Degree of Master of Sciences requires: *Diplomas* in the schools of Metaphysics; History; Modern Languages; English; Geology and Natural History; Agriculture, General and Analytical Chemistry, and Physics; Mathematics; and *Certificates of Proficiency* in Anatomy, Physiology and Hygiene.

The Degree of Batchelor of Arts requires: *Diplomas* in the schools of Metaphysics, Ancient Languages; English; History; and *Diplomas* in Geology or Natural History; Chemistry or Physics; *Certificate of Promotion* in Intermediate Mathematics; *Certificate of Proficiency* in Physiology and Hygiene.

Chemistry or Physics may take the place of History.

Certificate of Promotion in a Modern Language may take the place of senior Latin or senior Greek.

The Degree of Master of Arts requires: *Diplomas* from all the academic schools, also *Certificates of Proficiency* in Constitutional and International Law, and Physiology. A satisfactory general examination on all subjects studied will be required of students for this Degree.

Candidates for any of the foregoing degrees must submit to the Faculty a suitable essay or oration to be delivered on Commencement day, if required.

The degree of Bachelor of Laws is conferred on graduates of the School of Law and Equity.

UNIVERSITY DEPARTMENT—Schedule of Classes and Hours.

MONDAY.

9 a. m.	10 a. m.	11 a. m.	12 a. m.	2 p. m.	3:30 p. m.	4 p. m.
Senior Metaphysics.	Junior French.	Junior Greek.	Junior Meta.	Physics.	Chemistry.	Drill.
Senior English.	Int. Mathematics.	Senior German.	Junior English.	Anatomy, P. & H.	Law.	
Junior Mathematics.	History.					
Senior Latin.	Senior Greek.					
Geology.						
C. & I. Law.						

TUESDAY.

9 a. m.	10 a. m.	11 a. m.	12 a. m.	2 p. m.	3:30 p. m.	4 p. m.
Senior Metaphysics.	Senior French.	Intermediate Greek.	Junior Meta.	Agriculture.	Chemistry.	Drill.
Senior English.	Senior Mathematics.	Junior German.	Junior English.	Zoology.	Law.	
Junior Mathematics.	Junior Latin.	Botany.		Anat., Phys. & H.		
Intermediate Latin.	Equity Jurisprudence.					
C. & I. Law.						

WEDNESDAY.

9 a. m.	10 a. m.	11 a. m.	12 a. m.	2 p. m.	3:30 p. m.	4 p. m.
Senior Metaphysics.	Junior French.	Junior Greek.	Junior Meta.	Physics.	Chemistry.	Drill.
Senior English.	Int. Mathematics.	Senior German.	Junior English.	Anat., Phys. & H.	Law.	
Junior Mathematics.	History.					
Senior Latin.	Senior Greek.					
Geology.						
C. & I. Law.						

UNIVERSITY DEPARTMENT—Continued.

THURSDAY.

9 a. m.	10 a. m.	11 a. m.	12 a. m.	2 p. m.	3:30 p. m.	4 p. m.
Senior Metaphysics.	Senior French.	Int. Greek.	Junior Meta.	Agriculture.	Chemistry.	Drill.
Senior English.	Senior Mathematics.	Junior German.	Junior English.	Zoology.	Law.	
Junior Mathematics.	Junior Latin.	Botany.		Anat., Phys. & H.		
Intermediate Latin.	Equity Jurisprudence.					
C. & I. Law.						

FRIDAY.

9 a. m.	10 a. m.	11 a. m.	12 a. m.	2 p. m.	3:30 p. m.	4 p. m.
Senior Metaphysics.	Junior French.	Junior Greek.	Junior Meta.	Physics.	Chemistry.	
Senior English.	Int. Mathematics.	Senior German.	Junior English.	Anat., Phys. & H.	Law.	
Junior Mathematics.	History.					
Senior Latin.	Senior Greek.					
Geology.						
C. & I. Law.						

SATURDAY.

Junior German.	Senior French.	Botany.	Zoology.	Law.	
	Junior Latin.				

NOTE.--Field Botany, Monday, Tuesday, Wednesday and Thursday at 8 a. m.

PREPARATORY DEPARTMENT.

PROF. LORENTZ.

This department aims to prepare young men for admission to the higher classes in the University, and to fit those, who do not desire to take the full course, for the business pursuits of life.

Candidates for entrance should be at least fifteen years old, and should have thoroughly accomplished the ordinary course of study in the common schools of the State.

JUNIOR YEAR.

FIRST TERM.

Geography—Guyot's Common School; Map Drawing.
Arithmetic—Stoddard's Complete and Stoddard's Mental.
English Grammar—(Swinton) Etymology.
Latin (commenced).

SECOND TERM.

Geography—Guyot's (continued); Map Drawing.
Arithmetic (continued).
English Grammar—Syntax and English Composition.
Latin—Grammar and Reader. Chase and Stuart.

THIRD TERM.

Arithmetic (completed).
English Grammar—Analysis, Prosody and English Composition.
Latin—Grammar and Readers.
Greek—First Book (Harkness).

SENIOR YEAR.

FIRST TERM.

Algebra—Robinson's Elementary, to Involution.
Book-keeping—(Bryant and Stratton) Single Entry.
Cæsar (two books)—Latin Grammar.
Greek—Grammar and Reader. (Goodwin).

SECOND TERM.

Algebra—Robinson's Elementary (completed).
Book-keeping—Double Entry.
Cicero's Orations (three orations)—Chase and Stuart's Latin Grammar.
Greek—Grammar and Reader.

THIRD TERM.

Geometry—Robinson's (first four books).
History of the United States (completed).
Virgil—Three books of Æneid; Latin Grammar.
Xenophon's Anabasis (two books). Greek Grammar.
Regular Lessons in English Composition from the beginning.

The studies preparatory to the Agricultural Department are as follows:
First Term.—Algebra, Arithmetic, Grammar, Geography.
Second Term.—Algebra, Arithmetic, Grammar, History United States.
Third Term.—Geometry, Arithmetic, Grammar, History United States.

Schedule of Daily Recitations.*

PREPARATORY DEPARTMENT.

FIRST TERM.

Year.	*First Hour.*	*Second Hour.*	*Third Hour.*	*Fourth Hour.*
Senior Year	Algebra.	Greek Reader.	Cæsar.	Book-keeping.
Junior Year.....		English Grammar.	Latin Lessons.	Arithmetic.

SECOND TERM.

Senior Year.....	Algebra.	Cicero.	Greek Reader.	Book-keeping.
Junior Year.....		Latin Reader.	Arithmetic.	English Grammar.

THIRD TERM.

Senior Year.....		Anabasis	Virgil,	Geometry.
Junior Year.....	Arithmetic.	Greek Lessons.	Latin Reader.	English Grammar.

*Subject to variation.

Military Department.

JAMES L. WILSON,
1st Lieut. 4th U. S. Artillery, Commandant of Cadets.

ROSTER OF CADET OFFICERS AND NON-COMMISSIONED OFFICERS.

Battalian Staff.

Cadet R. Armstrong,.....1st Lieut. and Adjutant.
Cadet R. A. Armstrong.....2d Lieut. and Ord. Officer.

Color Guard.

Cadet N. D. Adams,.....Sergeant.
Cadet J. D. Cox, ...Corporal.
Cadet A. A. Hodge.....Corporal.
Cadet F. Lively .....Corporal.

Company "A."

Cadet H. Fleming.....Captain.
Cadet R. W. Tapp.....1st Lieutenant.
Cadet G. E. Boyd.....2d Lieutenant.

Non-Commissioned Officers.

Cadet B. C. Wilson.....1st Sergeant.
Cadet J. E. Charles.....2d Sergeant.
Cadet W. J. White.....3d Sergeant.
Cadet E. L. Strode.....Corporal.
Cadet M. D. Helmick.....Corporal.
Cadet D. L. Jemison.....Corporal.

Company "B."

Cadet J. D. Sweeney .....Captain.
Cadet W. S. Stewart.....1st Lieutenant.
Cadet R. A. Armstrong.....2d Lieutenant.

Non-Commissioned Officers.

Cadet E W. Lawson .....1st Sergeant.
Cadet George P. Robinson .....2d Sergeant.
Cadet E. S. Elliott .....3d Sergeant.
Cadet T. R. Shepherd .....Corporal.
Cadet R. W. Dawson .....Corporal.
Cadet A. L. Romine .....Corporal.

Drum Corps.

Cadet E. S Elliott .....Trumpeter.
Cadet A. C. Boyd .....1st Tenor Drummer.
Cadet H. L. Coogle .....2d Tenor Drummer.
Cadet F. T. Haught .....Bass Drummer.

General Roster of State Cadets.

DISTRICT I.

Name.	*County.*	*When Enlisted.*	*Status.*
Adams, N D	Tucker	March 8, 1881	Present.
Birkett, R. F	Ohio	September 5, 1883	Dropped from the rolls.*
Boyd, George E	Ohio	September 19, 1883	Present.
Stoetzer, H. G	Ohio	September 18, 1884	Present.

(Two vacancies.)

DISTRICT II.

Lawson, E. W	Taylor	September 12, 1881	Present.
Cox, J. D	Marion	March 24, 1882	Present.
Cox, I. S	Marion	May 6, 1883	Discharged Feb. 11, 1885.
Yost, L. H	Marion	September 10, 1883	Discharged Dec. 10, 1884.
Freeland, P. L	Wetzel	November 27, 1885	Deserted February —, 1885.

(Three vacancies.)

DISTRICT III.

Fleming, H	Ritchie	March 31, 1880	Present.
Gardner, R. S	Harrison	March 13, 1883	Discharged March 26, 1885.
Romine, A. L	Harrison	September 27, 1883	Present.
Wolf, H. M	Doddridge	September 27, 1884	Present.
Bacchus	Doddridge	September 4, 1884	Deserted January 5, 1885.

(Two vacancies.)

DISTRICT IV.

Sweeney, J. D	Tyler	March 31, 1880	Present.
Stuart, W. S	Doddridge	September 7, 1881	Present.
Turner, George H	Wood	September 3, 1884	Present.
Dolan, Thomas A	Wood	September 4, 1884	Present.

(One vacancy.)

*Dropped from the rolls by reason of having left the institution without having returned books, arms and accoutrements, State property.

DISTRICT V.

Charles, J. E.	Mason	September 5, 1883	Present.
English, L. S.	Mason	March 19, 1884	Present.
Musgrave	Mason	September 3, 1884	Present.
Kidd, George B.	Jackson	November 28, 1884	Deserted February —, 1884.

(Two vacancies.)

DISTRICT VI.

Armstrong, R.	Putnam	April 11, 1879	Present.
Long, George T.	Cabell	October 28, 1884	Dropped from the rolls.*
Brown, J. E.	Wayne	November 22, 1884	Present.
Cox, E. W.	Wayne	December 13, 1884	Present.
Prickett	Cabell	December 20, 1884	Present.

(One vacancy.)

DISTRICT VII.

Robinson, George P.	Kanawha †Logan.	September 7, 1883	Present.

(Four vacancies.)

DISTRICT VIII.

Liveley, F.	Summers	September 6, 1883	Present.
Rector, J. C.	Wood, †Monroe.	September 17, 1883	Discharged Dec. 20, 1884.
Hodge, A. A.	Monroe	September 27, 1883	Present.

(Three vacancies.)

DISTRICT IX.

Wilson, B. C.	Kanawha	September 5, 1883	Present.
Cutlip, J. E.	Braxton	September 3, 1884	Present.

(Three vacancies.)

DISTRICT X.

Armstrong, R. A.	Upshur	March 8, 1882	Present.
Helmick, M. D.	Lewis	September 22, 1883	Present.
Martin, Thomas	Taylor	September 22, 1884	Present.
Moore, J. H.	Barbour	March 25, 1884	Present.

(One vacancy.)

DISTRICT XI.

Tapp, R. W.	Monongalia	March 31, 1880	Present.
Lazzell, J. E.	Monongalia	September 5, 1883	Present.
Jemison, D. L.	Monongalia	September 5, 1883	Present.
White, W. J.	Preston	September 14, 1883	Present.
Elliott, E. S.	Preston	September 10, 1884	Present.

DISTRICT XII.

Wirgman, R.	Mineral	September 6, 1884	Present.
Henshaw, W. T.	Berkeley, †Hamps're.	October 28, 1884	Present.
Melvin, N. J.	Berkeley, †Hardy.	January 14, 1885	Present.
Hayes, U. S. G.	Barbour, †Grant	March 26, 1885	Present.

(One vacancy.)

*Dropped from the rolls by reason of having left the institution without having returned books, arms and accoutrements, State property.

†County to which accredited.

DISTRICT XIII.

Emmert, H. H.	Berkeley	September 3, 1884	Present.
Dawson, R. W.	Morgan	September 3, 1884	Present.
Strode, E. L.	Jefferson, †Berk'ley	September 6, 1884	Present.
Shepherd, T. R.	Jefferson	September 5, 1884	Present.
Hooff, F. B.	Jefferson	October 10, 1884	Present.

VOLUNTEER CADETS.

Swan, LeRoy	Tyler	September 10, 1884	Present.
Smith, H. F	Fayette, Pa	September 3, 1884	Present.
Boyd, A. C	Ohio	September 9, 1884	Present.
Cox, E. M.	Marion	September 5, 1884	Ap. to Cadetship Dec. 13, '84
Haught, F. T.	Marion	September 19, 1884	Present.
Armstrong, J. Vaught	Jackson	December 2, 1884	Discharged Feb. —, 1885.

†County to which accredited.

*Distinguished Cadets, 1883-84.

Name.	Military.	Academic.
Adams, N. D.	Military.	
Boyd, G. E.	"	
Fleming, Harvey	"	
Gardner, R. S.	"	
Grady, C. P.	"	
Michael, W. H.	"	
Robinson, A. L.	"	
Robinson, George P.	"	
Ruffner, A.	"	
Sweeney, J. D.	"	
Stuart, W. S.	"	
Tapp, R. W.	"	

*Students attaining a standing of nine in a scale of ten, for the entire year, are entered as "distinguished."

General Remarks.

LOCATION.

The West Virginia University is located at Morgantown. Its buildings are ample, eligibly situated, and admirably adapted for their purposes. They are immediately outside of the borough, on the right bank of the Monongahela river, and command a wide prospect of exceedingly attractive and picturesque scenery. Morgantown can be reached daily by coaches from Fairmont on the Baltimore and Ohio railroad, and from Uniontown, Pennsylvania. Steamboats from Pittsburgh arrive every day at Geneva, twelve miles below Morgantown, and, under appropriations from Congress, the slackwater navigation of the river will soon extend to Morgantown. Two railroads from Fairmont to Morgantown are now in process of construction, and it is confidently believed that railway communication will be open to the University before the beginning of the next college year.

ORIGIN.

The University is the outgrowth of the "West Virginia Agricultural College," established in 1867, with the proceeds of the State's share of the land, granted by Congress in aid of agricultural and industrial education in the States. This fund, increased by subsequent appropriations by the State, now amounts to about $110,000, and constitutes the permanent endowment of the institution. There are annual appropriations for current and contingent expenses. The citizens of Morgantown, with generous appreciation of educational advantages, contributed in grounds, buildings and money about $50,000.

SCOPE AND WORK.

The scope of the University and the work which it is accomplishing will be best understood from the statements of the several Schools, already set forth.

THE PROFESSIONAL SCHOOLS.

The Law Department of the University aims to prepare students for the practice of the Law in any part of the United States.

It aims to make not merely *theoretical*, but *practical* lawyers, who will go from the lecture room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

To the young man who aspires to become thoroughly fitted for the Profession of Law, the advantages of a University course can scarcely be overestimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

The degree of Bachelor of Laws is conferred upon graduates in this department.

The Medical Department of the University does not yet possess all the equipments and advantages of some of the older Medical Schools of the country, but is presided over by a practical Physician of eminent ability and large experience; and it is believed that the instruction in Anatomy, Physiology and Hygiene, together with ample practice in the dissecting room, and with the Schools of Chemistry and Botany, unsurpassed opportunities are offered for the preliminary instruction of medical students, as well as for the education of unprofessional students in essential branches of this department. Nothing is likely to prove so calamitous in the future career of a student, in any vocation of life he may enter, as ignorance of the laws of health, and however high and promising his mental discipline and attainments may be, if he is ignorant of the constitution and laws of his physical organism, observation proves that his success and usefulness will not only be impaired but the chances are that he will be cut down in the prime of life by the hand of disease. It is these considerations which render this department of the University a most essential adjunct in the education of every student, whether he is seeking to prepare himself for the medical profession or not.

THE PREPARATORY.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regu-

lar College studies. This department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevating grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity of this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of Collegiate Study proper, or shutting out from the advantages of the Institution many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or, if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

During the spring term of each year, (beginning on the second Wednesday in March,) unusual facilities are provided for all who may desire to take a short and limited course, or to fit themselves for teaching, or other specialties. All needed assistance in the work being rendered by the several professors of the University, superior advantages are afforded to all comers.

REQUISITES FOR ADMISSION.

I. All candidates for admission to any School of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must produce certificates of honorable dismission from the same.

III. No student will be graduated in any School of the University who is deficient in English elementary studies.

IV. Candidates should procure a copy of the printed laws of the University, also the Treasurer's receipt for tuition before presenting themselves for enrollment.

V. Applicants for admission to the Preparatory Department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic, through common fractions.

VI. Students are required to pronounce Greek and Latin according to the so-called Continental Method.

EXAMINATIONS.

Examinations are held at such times as each professor may deem necessary, in his school, and at the close of each session.

No student shall be excused for non-attendance, except upon presentation of a reason which may be considered valid by the Faculty.

In ascertaining a student's standing, the examination marks shall count one-half and the recitation marks one-half, and the time allowed for each examination shall be not less than two hours and may be as much more as the Professor in charge shall deem sufficient.

Students who have not before been at the University should, on

their arrival, report themselves to the chairman of the Faculty, and by him be assigned to such Schools as they may desire and be prepared to enter.

TUITION.

Tuition shall be free to all students from this State over fifteen years of age, in the several departments of the University, except in the Schools of Law and Medicine: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, shall have free tuition, and all others shall be charged at the rate of $8.00 per term in the University Department, and $5.00 per term in the Preparatory Department.

Students from other States shall be charged $12.50 per term for tuition in the University Department, and $5.00 per term in the preparatory Department.

Tuition in the Law Department, - - - -	$10.00 per year.
Tuition in the Medical Department, - - -	15.00 per year.
Contingent Fee in all Departments, - - -	2.00 per year.

Students in Analytical Chemistry will be charged a fee of $20 per session to cover the use of material and wear and tear of apparatus in their hands.

There will be no variations nor deductions from these rates for any cause whatever, except in the case of protracted illness.

Ministerial students are admitted free.

BOARDING AND EXPENSES.

Steps have been taken by the Board of Regents looking to the establishment of a large Dormitory on the University grounds, where the whole body of students can be comfortably and appropriately domiciled and supervised.

Three methods of boarding are practiced: [1.] Self-boarding, by individuals, or, more commonly, by small groups or colonies, composed of members of the same family, or of neighboring families. Rooms are hired, and furniture, provisions and fuel are brought from home. When well managed, this is an excellent and very economical mode of living. From $1.00 to $1.50 a week per pupil may be set down as the cost. [2.] Club boarding. This has been practiced for some time and is an excellent system. A company of young men rent a number of rooms or an entire house and then organize and operate a boarding club. The price of boarding in clubs varies from $1.75 to $2.75 per week, including rent of room. [3.] Boarding in families. The difficulties formerly encountered in procuring suitable places for students desiring to board in families have disappeared.

Good boarding can be found at reasonable prices ranging from $2.50 to $3.50.

Incidental expenses depend on the habits of the student. The law prohibits students incurring debts at stores, groceries, etc., except on the written order of parents, guardian or teacher. Unnecessary and lavish expenditures induce not only waste of time and means, but neglect of study and formation of bad habits.

PRIZES.

THE REGENTS' PRIZES—To the student who shall write the best essay upon a given subject, $25.00. To the student who shall be adjudged the best declaimer, $15.00. These prizes to be awarded after public competition, by a committee of citizens appointed by the Faculty.

These were awarded at the last contest as follows:

Essay—G. W. Morgan, - - - -	$25.00
Declamation—Wm. B. Casper, - - -	15.00

DISCIPLINE.

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept in which are entered the grade of scholarship of each student, and his absence from exercises. A report is sent at the beginning of each term to parents or guardians, notifying them of the matriculation of their sons or wards. If the habits of study or general deportment of any student shall be found to be in violation of the established discipline, or if he shall absent himself from recitation or morning roll call more than twice in any month, without good cause, the parent or guardian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is especially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his classmates that he be punctual in his place from the first day of the term till the last. No excuse will be accepted for absence unless such absence is unavoidable It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the

mere pleasure of the student or his friends can be allowed to interfere with those studies.

RELIGIOUS INSTRUCTION AND WORSHIP.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all the students are expected to be present. They are also expected, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

LIBRARY.

A repectable beginning towards a University Library has been made. About five thousand volumes have been carefully selected and placed on its shelves, including, not only many choice and valuable books of reference, but also standard works in the various departments of History, Biography, Theology, Agriculture, Arts, Science and General Literature.

We respectfully request the friends of education to make contributions to its shelves.

A deposit of $2.00, or security from some professor or teacher, is required of all students who wish to avail themselves of the privileges of the Library. This is intended to secure the safe-keeping and return of books borrowed. Whatever balance remains at the end of the year is refunded.

READING ROOM.

Many of the journals of the State and valuable religious papers of some of the leading religious denominations are gratuitously sent to the reading room of the University.

MUSEUM.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labeled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells

The vicinity of the University offers unrivaled advantages for the study of Practical Geology. Especial attention is paid to this branch.

Additional provision has recently been made for the study of Practical Geology by means of an annual excursion of four weeks with Prof. White through portions of West Virginia and of surrounding States.

DONATIONS TO THE MUSEUM.

H. L. Robinson—Case of finely mounted birds.

J. W. Moore—Indian relics from Tucker county, West Virginia.

R. Armstrong—Turtle stone from Monongalia county.

Walter Hough—Specimens of rock and fossils from the Morgantown gas well.

Rev. D G. Helmick—Fossils and gypsum from mountain limestone, Pocahontas county.

R. S. Gardner—Polished coral and moss agate.

Mrs. Henrietta Kines—Piece of shell and grape shot from Braddock's Field.

LITERARY SOCIETIES.

There are two of these, (the Parthenon and Columbian,) in connection with the University, supplied with suitable halls, handsomely furnished, whose exercises in Composition, Reading, Orations, Debate and Criticism are, in many respects, of great advantage to the student. They also afford facilities for the study of and acquaintance with Parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries.

APPENDIX.

NOTES

ON THE

GEOLOGY OF WEST VIRGINIA.

BY PROF. I. C. WHITE.

The annual geological excursion from the West Virginia University during May, 1884, was taken by all the members of the graduating class, viz: W. T. W. Barb, R. C. Berkeley, Jr., W. H. Michael, H. L Robinson, and J. D. Sweeney, of the class of 1885.

The route selected was as follows: From Morgantown across Chestnut ridge and down to the Baltimore and Ohio railroad at Independence; thence along the Baltimore and Ohio railroad, stopping at many points and walking between stations, so as to pass in review the entire column of rocks from the Pittsburg coal down to the Archæan in the Blue Ridge at Harper's Ferry. Returning to Piedmont we took the West Virginia Central and Pittsburg railroad for the wilderness region of the Upper Potomac coal field in the vicinity of Fairfax stone, the then terminus of that railroad. From this point we recrossed the Alleghanies on foot, reaching the railroad at Buckhannon, Upshur county, 75 miles from Fairfax. From Buckhannon we passed along the narrow gauge railroad to Clarksburg; thence along Baltimore and Ohio railroad to Parkersburg, thence up the Little Kanawha river to Burning Springs, and returned by boat; thence up the Ohio river to Wheeling; and from there by the B. & O. back home.

The class and myself are under obligations for favors to Mr. L. M. Cole, Gen. Ticket Agent B. & O. R. R.; Hon. H. G. Davis, Col. T. B. Davis, and Capt. Harrison, officers of the W. Va. C. and P. R. R.; also to the Superintendent of the Elk Garden mines; to Mr. Porter and engineers of the W. Va. C. & P. construction force, and to Mr. Riordan, ex-state mine inspector of Maryland; to the officers of the Buckhannon, Weston and Clarksburg railroad, and to Capt. S. P. Wells & Bro., of the steamer Oneida, Parkersburg.

These annual excursions are taken with a view of giving the student a general survey of all the rock formations accessible in our State; hence but little time can be given to detailed examinations except in limited areas of especial interest, and although many notes were taken which may fit into future papers, yet only two or three regions were examined with that care which is necessary to warrant the publication of results.

One of the regions where detailed examinations were made is that in the vicinity of Elk Garden, on the West Virginia Central and Pittsburg railroad. Here, about 12 miles southwest from Piedmont, nearly 400 acres of the Pittsburg coal are caught in the same great trough that holds so much of that bed along George's creek between Piedmont and Frostburg. This area of the "Big vein" coal, as it is locally termed, has been known for a long time, but being entirely inaccessible to transportation facilities, has remained undeveloped until, through the enterprise of Hon. Henry G. Davis, the West Virginia Central and Pittsburg railroad was recently built out to it from Piedmont.

The Pittsburg coal area of Elk Garden occupies the summit of the mountain at an elevation of 2,350′ A. T., while the North Potomac river cuts an almost vertical chasm 800′ to 1,000′ deep alongside its western boundary, thus exhibiting a fine exposure of the Barrens (No. XIV), the Lower Coal measures (No. XIII), and the upper portion of the Great Conglomerate (No. XII).

The following section was obtained in descending from the summit of the mountain above the Elk Garden mines to the North Potomac river directly below the Elk Garden cottage:

1.	Concealed, but containing a massive sandstone (Sewickley)				50′
2.	*Coal, Sewickley*				7′
3.	Concealed				110′
4	Coal, Pittsburg	Roof coal,	coal	1′ 6″	15′ 10″
			shale, gray	1′ 6″	
		Main bench	bone coal	0′ 7″	
			top coal	2′ 6″	
			breast coal	5′ 0″	
			mining coal	0′ 6″	
			mining ply	1′ 6″	
			slate, d'k gray	0′ 3″	
			bottom coal	2′ 6″	
5.	Concealed				170′
6.	Coal, Elk Lick	coal		1′ 4′	4′ 8″
		slate		2′ 0′	
		coal, slate		1′ 4′	
7.	Concealed and massive sandstone (*Mahoning*)				225′
8.	*Coal, Upper Freeport*	coal		1′ 3″	8′ 3″
		shales		4′ 0″	
		coal		3′ 0″	
9.	Shales, sandstone and concealed				55′
10.	*Coal, Lower Freeport?*				2′
11.	Concealed and massive sandstone (Freeport)				155′

12. *Coal, Lower Kittanning*	coal 0′ 8″ bone coal 0′ 3″ coal 0′ 10″ dark sandy F.C. 6′ 24″ coal, good 2′ 10″	5′ 10″	
13. Concealed to base of No. XIII		120′	
14. Massive sandstone (Homewood) top of XII		50′	
15. *Coal*, slaty		1′	5′
16. Shaly sandstone		40′	
17. Massive sandstone		10′	
18. Concealed to level of North Potomac river		10′	

RESUME OF SECTION.

Upper coal measures, XV.	173′
Barrens, XIV	400′
Lower coal measures, XIII	346′
Pottsville, conglomerate, XII, exposed	114′
Total height of section	1,033′

The *Sewickley coal*, No. 2, has been opened on the Elk Garden tract, and found to have a thickness of 7 feet, but there is hardly sufficient roof over it to warrant mining, since the coal, although quite pure, would probably be too soft to bear shipment. The surface above this coal bed seems to have been preserved from erosion by a massive sandstone, small blocks of which are seen scattered over the surface.

The Pittsburgh coal, No. 4, has here practically the same structure as at Piedmont and elsewhere in the George's creek basin, the only difference being that while the main bench is there seldom more than 10′ thick, it is here 14 feet, nearly all of which is merchantable coal. The output is approximately 1,000 tons daily, and it goes to the seaboard cities mostly as a steam coal, for which purpose it can hardly be excelled.

No. 6 is the bed of coal that has been opened in the hill below the cottage, but it contains slate and other impurities in such quantity as to render it worthless; it possibly represents the *Elk Lick coal* of the Pennsylvania series.

The surface of interval No. 7 is covered with large blocks of massive sandstone that have come from the *Mahoning series*, which is included therein.

The Barrens, XIV, foot up only 400′ in thickness at Elk Garden, instead of 600′ which I obtained at Piedmont in 1880. This latter measurement was partly compiled, and hence is possibly too great, since it is hardly probable that the *Barrens* have decreased 200′ in thickness in the 12 miles between Piedmont and Elk Garden.

The 400′ measurement in the above section cannot be more than 25′ to 30′ in error, since the hills there are practically vertical, and to compensate for the slight eastward dip I have added 30′ to the interval as given by the barometer.

The Upper Freeport coal, No. 8, is known here as the "*Split vein*," from the fact that it is almost universally separated into two portions by an intervening layer of shale. This bed has been exploited in the hill below Elk Garden cottage, and also on the other side of the property near the incline, but at neither locality is it thick enough to mine profitably at present, though the lower bench is a rather good coal and ought to coke fairly, judging from its physical characteristics.

No. 10 of the section is reported as very clean coal, and its stratigraphical position seems to parallelize it with the *Lower Freeport coal* of Pennsylvania.

The Lower Kittanning coal is represented by No. 12 of the section. It has been opened in the hill above the main line of the West Virginia Central and Pittsburg railroad, and used for coaling the engines. Unfortunately for this coal, it is split by a very sandy layer, which renders its mining both difficult and expensive, and there seems but little prospect that this objectionable feature will disappear, since where the same bed was opened near the foot of the Elk Garden incline, this sandy stratum was even thicker than that given above. This is the "*Six-foot*" *bed* of Piedmont and George's creek, or the same as that mined by Mr. Spangler in Westernport hill.

The *Lower Coal Measures* (No. XIII) foot up 346′ in thickness here instead of 268′ at Piedmont, and it is possible that the decreased interval of the *Barrens* may be in part accounted for by this 80′ increase of the No. XIII beds.

The North Potomac river flows from Elk Garden to Piedmont at about the same geological horizon in the top members of No. XII, and hence the inter-conglomerate coal, No. 15, is frequently visible in the cuts along the West Virginia Central and Pittsburg, railroad, and from this fact it has come to be known locally as the "railroad coal. It varies much in thickness, sometimes almost disappearing, and again thickening up to 5′ or 6′, as it does just above Blaine station. The coal is slaty and otherwise impure, however, and hence it will probably never furnish any merchantable fuel even where it is thick enough to mine. The bed in question is the same one that occurs near the end of the Davis bridge at Piedmont, 60′ to 75′ above the river, where it is 2 feet thick. It is one of the *Mercer series* of Western Pennsylvania.

NOTE ON THE LOWER KITTANNING COAL IN THE NEWBURG SHAFT.

In a paper for *The Virginias*, during 1882, I gave the record of a diamond drill hole that had been sunk at Newburg, Preston county, W. Va., to test the thickness of the *Lower Kittanning coal*. As the coal was found of merchantable thickness and quality, a shaft was sunk to it, which has now been completed, and from the superintendent I learned the following particulars, which are of sufficient

interest for publication. The shaft was sunk a few rods distant from the bore-hole and begins at a higher level, hence its record is slightly different from that of the latter. The mouth of the shaft is 480′ under the *Pittsburg coal*, which comes in the tops of the hills here, and as the *Upper Freeport coal* was struck at 165′, the *Barrens* (XIV) have a thicknes of (480′ + 165′) 645′, against 636′, as given by the bore-hole record in the paper above referred to. The depth of the shaft to the bottom of the *Lower Kittanning coal* is 359′, and as the *Upper Freeport* bed was 5′ thick the interval from the latter coal to the bottom of the *Lower Kittanning* is 359′–170′=189′, or say 180′ between the two beds.

The bottom portion of the shaft exhibits the following details according to the measurements of the superintendent:

1. Sandstone			
2. Coal, *Upper Kittanning*	coal	1′ 0″	7′ 3″
	slate	0′ 3″	
	coal, slaty	2′ 0″	
	fire clay	2′ 0″	
	coal, good	2′ 0″	
3. F. C. & Shales with iron nodules			15′
4. Coal, *Lower Kittanning*	coal	0′ 10″	9′ 5″
	shale, gray	0′ 10″	
	coal	0′ 6″	
	bony coal	0′ 3″	
	coal	4′ 6″	
	black slate	3′ -9″	
	coal	1½′-2½″	

No coal had been shipped from No. 6 at the time of our visit in May, since a greater amount of water was encountered than the pumps could bring up, but arrangements were then being made to put in pumps of larger capacity, and when this is done there is no reason why coal may not be profitably shipped from the *Lower Kittanning* bed, since so far as appearances indicate, it would seem to be an excellent gas coal.

THE UPPER POTOMAC COAL FIELD IN THE VICINITY OF FAIRFAX STONE.

During the last May excursion from the West Virginia University, our party encamped two days at Fairfax summit, with Mr. Wm E. Porter, general superintendent of the West Virginia Central and Pittsburg railroad. While stopping at this point, an opportunity for studying the coals of that field was presented under the guidance of Mr. Riordan, ex-State Mine Inspector of Maryland, who made all the openings in the several coal beds there, and to whom we are indebted for much aid in the hasty examination that was undertaken.

Fairfax is a station on the line of the West Virginia Central and Pittsburg railroad, forty-five miles from Piedmont, and exactly on the summit of that great divide which separates the waters of the North Potomac from those of Cheat River. The Point is only a few

hundred yards from the celebrated stone, set up by the commissioners that located the southwestern boundary of the lands of Lord Fairfax, which now marks the southwestern corner of Maryland.

The grade of the railroad at Fairfax summit is 3,057′ A. T., the highest elevation yet attained by any railway east from the Mississippi river, since it is situated near the central line of the Alleghany mountain plateau in the region of its grandest development.

A geologist in crossing the Alleghanies along the line of the Baltimore & Ohio railroad, will observe that they are made up of three grand arches, (leaving out Laurel and Chestnut ridges at the west and the minor crumples on the sides of the great folds,) the structure of which is roughly as follows, along a line at right angles to the strike, beginning at cut No. 80, seven miles west from Rowlesburg, and ending at the Eastern Front Ridge of the Alleghanies.

The most western of the arches shown in the above diagram has its crest near Terra Alta (formerly Cranberry summit) where the upper members of the *Chemung beds* are brought to the surface, at an elevation of 2,500′ A. T., while the western slope of the arch ends in the *Barren Coal measures*, No. XIV, at Cut No. 80, ten miles to the northwest.

The syncline next east from the Terra Alta axis catches the *Pottsville conglomerate*, No. XII, and the basal portion of No. XIII in the crests of the mountains, and although the Baltimore & Ohio railroad runs for nearly ten miles along the eastern slope of the Terra Alta arch before crossing this syncline, yet the actual length of the slope is only about five miles when measured at right angles to the strike.

The crest of the second great arch crosses the Baltimore & Ohio railroad nearly through the centre of Mountain Lake Park, about five miles southeast from the Oakland syncline. It is greater than the Terra Alta uplift, since the *basal members* of the *Chemung beds* are brought to the surface in the very tops of the mountains 3,000 feet above the sea. The southeastern slope of the Mountain Lake Park axis is long, and when we come to its base, on the North Potomac river at Piedmont, we find that great syncline embracing rocks nearly up to the top of the Upper Coal measures, No. XV.

Back-bone Mountain of the Alleghanies is made by the outcrop of No. XII conglomerate, where it passes into the air on the southeast slope of the Mountain Lake Park arch. The Baltimore & Ohio railroad crosses the Back-bone mountain at Altamont, and from this point it forms a long line of blue as far south as vision is possible. This Back-bone mountain forms the northern rim of the Upper Potomac coal field, and at Fairfax its summit is between four and five miles distant.

The southern rim of the Upper Potomac coal field is formed by the same great mountain maker, the conglomerate of XII and its companion No. X, where they pass into the air again in the Eastern Front Ridge on the western slope of the third and last grand arch of the Alleghany range, the Keyser axis. The Baltimore & Ohio railroad

emerges from this mountain through the gap of the North Potomac, three miles below Piedmont.

The North Potomac river takes its rise only a few yards distant from Fairfax Stone and with many windings follows down this great syncline just described to Piedmont.

The Pittsburg coal, or "Big vein" of Elk Garden, once covered all the region between the two rims (Back-bone and Eastern Front Ridge) of this wide basin, but the North Potomac, Stony river, and their numerous tributaries have, in the course of long ages of erosion, removed it all except two or three isolated patches covering only a few acres each, which yet remain to attest the once wide expanse of the *Pittsburg bed*. The identification of the *Pittsburg coal* in the summits of two knots at Fairfax constitutes one of the most interesting features of our work, for there is no other outcrop of this coal nearer than Elk Garden, 30 miles distant.

The area of the *Pittsburg coal* that has thus been lost by erosion from the basin included between Back-bone mountain and the Eastern Front Ridge, is enormous, for the distance from Piedmont to Fairfax is 45 miles, and the breadth of the basin from one mountain to the other is from 15 to 20 miles. But the same course of reasoning which assures the geologist that the *Pittsburgh bed* once covered all of this great basin, renders it equally certain that this coal bed formerly stretched in a vast sheet westward across the grand arches of the Alleghenies until it connected with the present outcrop of that bed along their western slopes. Some idea of the amount of erosion from the Alleghenies may be gained when it is stated that if we could restore the rocks that have been swept off from the Mountain Lake Park arch, the Pittsburg coal would be found there at the height of more than 7,000 feet above the present surface, or, say at 10,000 feet above the sea, and yet this estimate includes none of the 10,000 feet of rocks, or more, still above the Pittsburgh coal, that have disappeared from the crest of the same arch.

I have spoken of all the region lying between the Backbone and Eastern Front Ridge mountains as constituting only one syncline or basin, and while this is strictly true in a broad sense, yet when we come down to details it is not, for several minor axes occur inside of the main basin, but they are so obviously mere crumples on the sides and bottom of the one great trough, that in giving a general outline of the structure they would rightly be neglected, since such folds and wrinkles are found between any two great arches whose crests are several miles apart.

The disposition and strength of these minor folds at the two localities (Piedmont and Fairfax) exercise a marked effect, however, upon the area of the coal between the two great arches, for at Piedmont this area is only three to four miles broad, while in the Upper Potomac region the coal area is fifteen to twenty miles in breadth, though of course erosion has been a large factor in creating this difference.

The foregoing description of the Allegheny mountain geological

structure in West Virginia, has been given in this connection, since nothing accessible to the general reader has been written upon the subject, and without it, she relative geological position of the Upper Potomac coal field could not be well understood.

To any one who wishes to see a primeval forest in all its unbroken wildness, we would commend a ride over the West Virginia Central and Pittsburg railroad from Piedmont to Davis, its present terminus. The railroad starts out in the upper half of No. XII, and following the immediate banks of the North Potomac, keeps at about the same geological horizon for twenty miles or more, when the course of the river veers eastward, and exposing all of No. XII soon cuts down into the *red beds* and *shales* of No. XI, which may be seen in the vicinity of Elkins; but from this point on up the stream its course meanders back toward the central portion of the basin, and Nos. XI and XII pass gradually under the river, while the shales and soft rocks of No. XIII come down and form the surface rocks and soils.

The scenery along the lower portion of the Potomac's course, where it is flowing in the conglomerate, is quite wild and picturesque, and to the lover of such will well repay the journey; but when we enter the area of the Coal measures, Nos. XIII and XIV, above Elkins, the cliffs and rugged heights disappear, and we come into a gently rolling country whose actual outline can scarcely be determined, so dense is the forest growth. For miles upon miles the railroad passes through this forest region where scarcely a single tree had been felled by human agency before the railroad entered it, and where yet only the vista of the railroad's course and an occasional lumberman's camp relieve the dreary monotony of the seemingly interminable jungle.

Here on this elevated plateau, we reach a zone of temperature and moisture (for I am credibly informed it rains or snows 60 to 75 days out of 100) in which the evergreen, hemlock and pine attain a luxuriance seldom equaled elsewhere in the country. These, together with other trees standing as thickly as nature will permit, with many prostrate, and over them rising a matted growth of laurel, all conspire to make up a picture which must be seen to be appreciated.

It is into such a wilderness as this, roadless and pathless, that Mr. Riordan penetrated, and where everything was covered with a deep accumulation of soil and other surface debris, was able, with an acumen almost instinctive, although founded on practical observation, to lay bare the wealth of coal which had there lain concealed for ages.

Two knobs rise to 150′-200′ above the general elevation of the railroad summit in the immediate vicinity of Fairfax station, one north, the other south from the line of the railroad.

The northern one is known as Fairfax Knob, and in descending from its summit the following section was constructed from the openings in coal beds and other exposures made by Mr. Riordan:

1. Concealed from top of knob.....50′
2. *Coal*, soft, good.....10′
3. Fireclay and shales.....15′
4 *Coal*, good..... 5′ 6″
5. Shales, fireclay and concealed.....15′-50′
6. Coal, with columnar structure called the "coking coal," has a shale 8″-12″ in bottom portion..... 7′
7. Concealed.....25′
8. Coal { coal .....2′ / rock.....1′ / coal ..... 2′ } ..... 5′
9. Concealed and sandstone.....70′
10. *Coal*..... 1′ 3″
11. Concealed.....25′
12. *Coal*..... 1′ 8″

I was greatly puzzed when first shown the three large beds of coal, Nos. 2, 4 and 6 of this section, opened one above the other, where the rocks are nearly horizontal, and therefore cutting off all chance of duplication. The puzzle was to determine in what part of the series they belonged, since everything is covered up for several miles in either direction, and the streams do not cut down any lower than No. 12 of the section. It was not until the following day, when I had identified the *Upper Freeport coal*, in an opening several miles distant, and determined from the pitch of the rocks that it must underlie Fairfax Knob at a depth of 400′-500′, that I could do anything toward solving the problem of identity in the coals of Fairfax Knob. The place of the Upper Freeport coal having been thus fixed, the only conclusion left was that these beds, Nos. 2, 4 and 6, represent the great *Pittsburg coal*, here split up into three divisions by the thickening up of parting slates. Although so much coal is exhibited in this section, its commercial value is limited, since, occurring as these beds do, only in two isolated knobs, the area is so small that when we make the necessary allowance for poor coal on the outcrop, the remaining area in all except the lowest, or bed No. 6, is so limited that these coals may be practically neglected in any estimate of the value of the Upper Potomac coal field.

There is a possibility that No. 2 may be the *Sewickley bed* with the 110′ of rocks which intervene between it and the *Pittsburg coal* at Elk Garden, thinned down to 15′ here; but this I regard as in the highest degree improbable.

The other knob in which these coals are found is known as Roger Camp hill, and lies just south from the railroad. In descending it the following succession was observed and compiled from Riordan's notes:

1. Concealed from top of knob.....10′
2. Coal, visible (same as No. 2 in preceding section).....2½′
3. Shales and concealed.....10′

4. *Coal* ..... 7′
5. Shales and fireclay with 15″ of coal near base ..... 12′
6. Coal, "coking bed" { coal, good...4′ 2″ / clay.....0′ 8″ / coal.....0′ 10″ } ..... 5′ 8″
7. Concealed ..... 25′
8. Coal { coal.....1′ / slate.....1′ / coal.....2′ } ..... 4′
9. Concealed. ..... 60′
10. Coal with a thin slate near middle..... 3′ 6″
11. Concealed to level of Fairfax station grade (3.055′ A. T.)...40′

Here we get practically the same section as that shown on Fairfax Knob, except that the uppermost bed of coal lies so near the surface that it could not be fully exposed. The area of coal in this knob, as in the one north of the railroad, is very limited, and Mr. Riordan informs me that there are no other localities in the Upper Potomac field where these beds of coal are to be found, having been worn away by erosion from everywhere else in the basin.

The Glade fork of Blackwater river, a tributary of the Cheat, starts from Fairfax summit, and flowing southwestwardly, finally cuts through the Barren measures (No. XIV) and exposes the upper members of the Lower Coals about five miles from Fairfax.

The Upper Freeport coal, known everywhere throughout the Upper Potomac-Cheat country as the "eight-foot vein," has here been opened on the bluff of the Glade fork by Mr. Riordan, where it shows the following structure:

1. Black slate.....
2. Coal..... { coal ..... 4′ 3″) / dark slate and bone coal, 1″-12″ } / coal ..... 3′ 6″) } 8′

The lower portion is a bright, rich, coking coal, while the upper half or that above the slate is better adapted for steam purposes. Mr. Riordan informs me that he has opened this coal in more than a dozen localities in this coal field, from the southern slope of Backbone mountain, where it passes into the air, across to the Eastern Front Ridge, where it in turn shoots up to the South, also on Stony river, and that at all these localities it exhibits a thickness never less than 7 feet, and usually 8 feet. It underlies many thousand acres in this coal field, and hence will prove of great value in the future. The dip is pretty strong to the northeast at the opening, and would carry this bed several hundred feet below the surface at Fairfax summit.

About two miles further down Glade fork it cuts through the *Lower Coal measures* to the top of No. XII conglomerate, and there Mr. Riordan has opened two other coal beds in No. XIII, which are shown in the following section, made on the left bank of Glade fork:

1. Concealed with a massive conglomeritic sandstone, (Mahoning) .....100′
2. *Coal, Upper Freeport* ("8 foot bed") ..... 8′
3. Concealed with much massive sandstone (Freeport). .....170′
4. Coal, Lower Kittaning "11 foot vein"

coal, soft	1′	8″		
slate		2½″		
coal	1′	4		
slate	0′	2″	11′	7½″
coal	4′	0″		
gray shale	1′	3″		
coal	3′	0″		

5. Concealed with much sandstone.. ..... 75′
6. *Coal, Clarion*, soft, clean ..... 3′
7. Concealed and sandstone to level of Glade fork..... 40′
8. Top of No. XII conglomerate in bed of stream.....

No. 4 is known here as the "New Dobbin House," or "11 foot vein," and from its relations, as given in the section, proves beyond doubt to be one of the *Kittanning beds* of the Pennsylvania series, and in all probability the lower one. It is, as will be seen, a composite bed, having a structure very much like the same coal in the shaft at Newburg, Preston county, and also at Campbell creek, Coalburg and Ansted, where this bed is mined on the Kanawha river.

The opening in this coal had partially fallen in when I visited the locality, hence the details of its structure were given me by Mr Riordan, who discovered the coal here and made the original opening. The same gentleman also informs me that the *Clarion coal*, No. 6, is very clean and pure, and would probably be a good coking coal.

The top of the *Pottsville* or *No. XII conglomerate* is seen in the bed of Glade fork, where our section ends, and a short distance below the stream begins to cut through it in a series of splendid cascades.

The *Lower Kittanning coal* of course underlies practically all of the Cheat-Potomac coal field, and will certainly furnish a vast amount of valuable fuel, and probably prove an excellent gas coal; but the area of the *Upper Freeport bed* at the top of the section is so great that the *Kittanning* is likely to remain untouched for many years.

The thickness of the *Lower Coal Measures*, No XIII, foots up a little more than 300′ in the above section, as compared with 268′ at Piedmont, and 346′ at Elk Garden.

RESUME OF THE WORK OF THE U. S. GEOLOGICAL SURVEY, IN THE GREAT KANAWHA VALLEY, DURING THE SUMMER OF 1884.

By I. C. White.

About the 1st of July of the past year, the writer was commisioned by the director of the U. S. Geological Survey, Maj. Powell, to begin

geological investigations in the Kanawha Valley. And with a *carte blanche* as to instructions, work was begun early in July and prosecuted until the 20th of October.

As the maps in course of preparation by the geodetic corps of the survey were yet in an incompleted state, and all work must consequently be of a preliminary nature, it appeared that the season could best be spent in a detailed examination of the stratigraphy of the Coal measures along the Kanawha and New river valleys, since, although much geological work had previously been done in this region by local geologists, mining engineers, and others, yet no connected study of the region had been undertaken from the time when Wm. B. Rogers and his assistants first mapped out its essential features 40 years ago, up to the present time.

There being a desire on the part of many citizens, and those who have large coal interests in the Kanawha valley, to get access to the general results of my season's work in advance of the appearance of the detailed report, I have consented, with permission of Maj. Powell, the director, to write a short article for *The Virginias*, in which I shall endeavor to embody a summary of such results as are of immediate importance to the citizens of the valley, or to the coal interests in general, reserving the right to change or modify any conclusions herein given, if such change be found necessary when all my notes have been fully studied and compared.

It gives me pleasure in this connection, to make general acknowledgment, as I shall hereafter do in detail, of the kindly and generous aid cheerfully given me in my work by the citizens of the valley, coal operators, mining engineers and railway companies.

The Kanawha coal field is a portion of the great Apalachian basin, which setting in the near northeastern corner of Pennsylvania, extends uniterruptedly through the states of West Virginia, Ohio, Kentucky and Tennessee into Alabama. Considered as a whole, this wide area may be regarded as a single trough, the deepest portion or central line of which, enters West Virginia from the southwestern corner of Pennsylvania and passes through the counties of Wetzel, Tyler, Pleasants, Wood, Jackson and Mason, in the last of which it crosses the Kanawha river about 10-15 miles above the mouth of that stream. Along much of this portion of the great trough or basin the *Coal Measures* proper are deeply buried from sight by several hundred feet of *Permian* or *Permo-carboniferous beds*, the No. XVI of Rogers. Where the Kanawha river trenches across these No. XVI rocks, in Mason county, however, they have been so greatly eroded that they now occupy only the summits of the hills, and hence in our account of the Kanawha measures they will be neglected altogether.

It will be seen from the foregoing statements, as to the central line of the Apalachian trough, that what is known as the Kanawha and New River coal fields lie entirely on the eastern slope of the

basin, while the corresponding western slope comes up in Ohio along the Hocking valley and other streams.

In Pennsylvania, and in the northern portion of West Virginia, this eastern slope of the Apalachian trough is itself thrown into several parallel basins by a series of great folds, but as we go southwestward to the Kanawha river, these arches flatten out and die away until only two or three small crumples are left.

Many persons suppose that there is a continuous northwestward dip in the rocks from where the coal measures pass into the air near Quinnimont northward to the Ohio river, but this is not strictly true, since my investigations have developed the existence of two well marked waves in the rocks along the Kanawha, and one at least on New river.

The first of the arches encountered above Charleston crosses the Kanawha river in the vicinity of Brownstown, and from this fact I have named it the *Brownstown axis* or *anticline*. The rise of the rocks from the bottom of the Apalachian trough above Point Pleasant to the crest of the Brownstown arch is about 1600 feet in a distance of fifty miles, and since the river flows nearly at right angles to the strike along this part of its course, the above figures may be taken as the amount of dip between the two points, though its rate is far from uniform, because more than half of this rise is accomplished in the last ten miles. The dip from Brownstown to ten miles above the mouth of the Kanawha may be said to vary from 10 to 90 feet per mile, N. 50°–60° W.

From Brownstown the rocks dip southeastward for six miles until we come to the bottom of the *Coalburg syncline*, half-way between Coalburg and Hampton. The descent of the rocks to the southeast from the crest of the *Brownstown wave* to the bottom of the *Coalburg trough* is about 210 feet, or say 35 feet per mile.

From the *Coalburg syncline* the rocks begin again to rise to the southeast and continue doing so until we come to the crest of the *Paint Creek axis*, which crosses the Kanawha river near the mouth of Paint Creek, 3½ miles southeast from the *Coalburg trough*, and gives the rocks a hoist in that direction of 140 feet.

From the crest of the *Paint Creek arch* the rocks again fall slowly away to the southeast until a drop of 75 feet has been made, where we come to the bottom of another trough which crosses the Kanawha river at Wyoming, two miles from the Paint creek uplift.

Thence on up the Kanawha and New rivers to the southeast the rise is continuous and rapid, varying from 50 to 400 feet per mile, until we reach the neighborhood of Fire creek, where another slight roll seems to interrupt the northwestern dip, beyond which the rocks again rise southeastward until the last of the *coal measure beds* has been carried into the air above Quinnimont.

It is quite possible, and indeed very probable, that many other flexures cross the rocks along the Kanawha, but they are of such insignificant proportions that they could not be detected with the ba-

rometer, and hence may be neglected in the general summary of the structure.

The following generalized section of the *coal measure rocks* along the Kanawha river has been worked out by the writer during this and other years and is given here for convenient reference, beginning with the *Upper Coal Measures*, No. XV, and ending with the *Great Conglomerate*, No. XII.

1. *Waynesburg Coal*	coal, rather shaly	0′ 10″	3′	No. XV Upper Coal Measures. 274′
	coal, soft, sulphureous	0′ 8″		
	shale	0′ 5″		
	coal, good	0′ 8″		
	coal, slaty	0′ 5″		
2. Shales and sandstones			75′	
3. *Raymond City limestone*			5′	
4. Shales and sandstones			130′	
5. Massive sandstone, Pittsburg.			35′	
6. Shales			15′	
7. *Coal, Pittsburg*	coal, slaty	1′ 0″	10′ 10″	
	coal.	0′ 6″	Roof.	
	slate	0′ 1″	4′ 10″ coal.	
	coal.	0′ 8″		
	shale	0′ 1″		
	coal, slaty	1′ 6″		
	fire clay	1′ 0″		
	coal, main bench	6′ 0″		

8. Concealed, *red shales* and sandstone		140′		Barrens, No. XIV. 806′
9. Massive sandstone		30′		
10. *Red shales*, sandstone and concealed		150′		
11. Coal, impure, (Elk Lick)		1′		
12. Shales		10′		
13. Sandstone, pebbly at base		30′		
14. Marly shales, with limestone nodules		30′		
15. *Two-mile limestone*		5′		
16. *Dark red shale, with iron ore*		30′		
17. Shales		25′		
18. *Coal*, and *coaly shale*, (Bakerstown)		5′		
19. Fireclay, and shales		5′		
20. Massive, pebbly sand-stone	Upper Mahoning	30′	321′	
21. Shales, and massive sandstone		100′		
22. Shales, coal, and *iron ore*		20′		
23. Very hard, yellowish white s'stone		25′		
24. *Coal, Brush creek* ("Big bed")		1′—15		
25. Massive sandstone	Lower Mahoning	75′		
26. Shales		10′		
27. *Coal*, (Upper Cannelton)		0′6′		
28. Massive sandstone		50′		
29. Shales, sandy		10′–20′		
30. Coal, (Middle Cannelton)		0′– 2′		
31. "Black Flint"		0′–10′		
32. Shales		1′– 5′		

33.	*Upper Freeport coal*, (Cannelton)	0′-10′	Lower Coal Measures, No. XIII. 976′
34.	Shales and sandstone	75′	
35.	*Lower Freeport coal*, (Coalburg)	0′- 8′	
36.	Shales and massive sandstone, (Upper Freeport)	75′	
37.	*Upper Kittanning coal*, (Winnifrede)	0′- 6′	
38.	Shales and massive sandstone (Lower Freeport), with several thin streaks of coal	250′	
39.	*Middle Kittanning coal*, (Cedar Grove)	0′- 4′	
40.	Shales	50′	
41.	*Campbell creek limestone*	1′	
42.	Shales	20′-42′	
43.	*Lower Kittanning coal*, (Campbell creek)	2′-10′	
44.	Fireclay and shales	5′	
45.	Massive sandstone, *Kittanning*	40′	
46.	*Coal*	0′- 2′	
47.	Shales	30′	
48.	*Ferriferous limestone*, (Cannelton cement)	2′	
49.	Shales	35′	
50.	*Clarion coal*, (Eagle)	2′- 4′	
51.	Shales	20′	
52.	*Coal*	1½′-2½′	
53.	Sandstone, and sandy shales	55′	
54.	*Putnam Hill limestone*, ("Black Marble")	1′	
55.	*Black, fossiliferous shales*	6′	
56.	Shales and sandstone with two or three unimportant coal streaks	275′	
56.	Homewood sandstone (Kanawha Falls rock)	150′	Pottsv'e or No. XII Conglomerate. 1310′
58.	*Coal*	0′- 2′	
59.	Massive sandstones and shales	275′	
60.	*Nuttall coal* (Sewell)	2′- 6′	
61.	Shales	75′	
62.	Massive sandstone	150′	
63.	Shales	75′	
64.	*Coal, Quinnimont?*	0′- 5′	
65.	Shales and sandstone	100′	
66.	*Coal*, Fire creek?	0′- 5′	
67.	Shales and massive sandstones with a few streaks of coal	580′	
68.	Limestone of No. XI		

SUMMARY OF THE SECTION.

Upper Coal Measures, No. XV	274′
Barren Coal Measures, No. XIV	806′
Lower Coal Measures, No. XIII	976′
Pottsville Conglomerate, No. XII	1310′
Total	3,366′

This summation gives a thickness of nearly 3,400 feet for the Carboniferous beds proper, along the Kanawha river, as measured between Point Pleasant and Quinnimont, but had erosion not removed Nos. XV, XIV and XIII in the vicinity of Sewell on New river, it is probable that the sum total of the Carboniferous rocks would have exceeded 5000′ in that latitude, so great is the thickening in Nos. XII and XIII as we go southward up the Kanawha and New rivers.

THE UPPER COAL MEASURES, NO. XV.

The members of this group stretch along the Kanawha river from Point Pleasant to Raymond City, at which latter locality its lowest beds shoot into the air along the river hills, but still occur on the east side of the river, a few miles back from the same, nearly as far south as Charleston.

The group as a whole, when compared with the same measures at the northern end of the State, has undergone the following changes: It has lost 100 feet in thickness; two important coal beds are entirely absent, the Sewickley and Redstone; the group contains more than 100 feet of *red shale* on the Kanawha, not a trace on the Monongahela; 100 feet of limestone are found on the latter stream, but only five feet on the Kanawha. These are the principal changes, but others will be noted in connection with the two coal beds of the series.

The Waynesburg coal, at the top of this group, is found along the river hills near the center of the great Apalachian trough, in the vicinity of Ten-mile, Leon, Arbuckle and Buffalo. It was once opened and mined to a small extent on the land of Mr. G. W. Craig, near Arbuckle, where it has the structure given in the section. It does not exceed three feet in thickness anywhere on the Kanawha. Not more than half of this is pure enough to use, and the bed is often absent entirely, so that economically it is of no importance.

The Pittsburgh coal, the lowest member of No. XV, has been successfully mined for many years at Raymond City, where, aside from the roof coal, it has a thickness of 5′ to 6′. Its final outcrop to the south is on Two-mile run, below Charleston, and there it has the structure given in No. 7 of the general section. Its outcrop is four miles back from the river, and hence it has been mined only in a small way for country use and for hauling to Charleston, six miles distant. The coal is a "splint" of most excellent quality on Two-mile, and is greatly prized for domestic purposes. The thickness of the main bench is seldom less than 5½ feet, and often exceeds six, and since its area spreads from Two-mile across to the Pocatalico at Sissonville, and thence to the Kanawha at Raymond City, there is evidently an important coal-field awaiting development here, when railroad facilities shall have rendered it accessible.

When followed down the Kanawha river from the region of Raymond City, the *Pittsburgh coal* develops a tendency to patchiness, *i. e.*, it is either absent entirely from large areas, or too thin and uncertain to warrant mining. Thus, near Red House, opposite Winfield, it is gone completely, although its underclay remains at the proper horizon, suggesting the thought that the Pittsburgh marsh may here have had its vegetable deposits swept away by the current which transported the coarse overlying sandstone.

Just before this coal disappears below the Kanawha river, however, it comes in again, five miles below Winfield, and has there been mined by Mr. Boyer at Oak Ridge. How much farther down

the river from the Oak Ridge mines this productive area extends, is unknown, since the outcrop of the coal is covered up by the terrace deposits until it sinks below the bed of the Kanawha river, and when it comes up to-day again near Point Pleasant the coal is only two feet thick. A boring put down by Mr. G. W. Craig at the mouth of Thirteen-mile, midway between the two points, throws some light on the subject, since there, at a depth of nearly 100′ under the river, the *Pittsburg coal horizon* was drilled through and only a trace of coal obtained, although the underclay below and sandstone above were in their proper places as usual. Hence although it may be possible that there are productive areas of the *Pittsburg coal* where its horizon underlies the Kanawha river between Big Hurricane creek and Point Pleasant, yet all the evidence so far obtained points to a different conclusion, or at least renders the existence of such productive patches very uncertain. Since, however, the coal's horizon does not get much farther below the river than 100 feet the question can be very easily determined by boring on the lands of those interested.

Some have supposed that the *Pittsburg coal* occurs in the hill tops, south of Charleston, but its outcrop does not cross Elk river in the region of the Kanawha at least, and ought not to do so anywhere to the east, since Elk flows nearly parallel to the strike of the rocks.

THE BARREN COAL MEASURES, NO. XIV.

In setting off the next lower group of beds in the Kanawha region, I find no change to be made from the limits fixed long ago by Wm. B. Rogers to No. XIV, viz: the *Pocatalico* (*Pittsburg*) *coal*, above, and the *Black Flint ledge* below, since there can be no doubt that these two horizons were correctly adjusted to the corresponding beds in the Pennsylvania column of rocks.

The great thickness (806 feet) of the *Barren measures* is a feature that arrests the attention of the geologist when examining this section, since the maximum of these beds in Pennsylvania is only 600 feet, while in Ohio it is sometimes only 400′, as against 645′ in Preston county, West Virginia. Great, however, as the thickness (806) appears, it is very probable that if we could have measured all of No. XIV, say in the region of Kanawha Falls, this 806′ would have become at least 1000′, since the measurement given was obtained in the vicinity of Charleston, while both Nos. XIII and XII swell up to double the thickness they have at Charleston, when traced southward to Kanawha Falls. Then, too, the interval from the top of the *Mahoning sandstone* to the base of No. XIV, which measures only 300′ at Charleston, increases to 456′ at the head of Cabin creek, which would tend to show that the whole Barrens (XIV) also keep increasing in thickness southward from Charleston to the region of the great geo-synclinal of the Kanawha field.

No. XIV may be conveniently subdivided into two portions, an upper, *soft*, or *shale series*, and a lower *hard* or *sandstone* and *con-*

glomerate group. The former is about 500′ thick and contains much *red shale*, while the latter is only 300′ thick and contains not a trace of *red beds.*

The *soft series*, yielding easily to crosion, soon disappears from the surface after the sandstone portion rises above drainage ; thus all the *shale series* disappears in the vicinity of Charleston, while the *sandstone group* is found on southward to Armstrong creek, 30 miles distant.

The only important member of the *shale series* is a *limestone*, which, from its development on Two-mile run, below Charleston, I have termed the *Two-mile limestone.* It occurs almost exactly midway in the *Barrens* (No. XIV) and in this respect occupies the same relative geological position as the *Green Crinoidal limestone* of northern West Virginia, and adjoining regions of Pennsylvania and Ohio. While the latter is certainly of *marine* origin, the *Two-mile bed* seems to be a *fresh water* deposit, since the only fossils found in it are species of *Spirorbis.* These, however, occur in immense numbers in the dark gray and sometimes in earthy limestone found at this horizon. This bed has been burned for lime at several localities, and when the purer portions are selected it slakes quite well.

The Green Crinoidal limestone of Pennsylvania is everywhere underlain by a bed of dark red, marly shales, containing iron ore nodules, and we find an exactly similar stratum 25′-30′ thick immediately below the Two-mile limestone.

The *lower*, or *sandstone member* of the Barrens, seems to represent collectively the *Mahoning sandstone series* of Pennsylvania. Though never more than 175′ thick in the latter State, and holding but one coal (Brush creek), yet on the Kanawha, it attains a thickness of 300′ to 400′, and includes two and sometimes three coal beds.

The group is caped at top, as in Pennsylvania, by a conglomerate which on the Kanawha is a mere mass of pebbles, many of which are larger than a hen's egg. The coarse sandy matrix holding these pebbles frequently disintegrates and leaves them free in immense numbers on the summits of the hills, where some have mistaken them for transported boulders. The great divide at the head of Cabin creek is covered with these large quartz pebbles at an elevation of 2,500 feet above the sea.

This *Mahoning sandstone series*, taken as a whole, is the friendly roof which has preserved much of the underlying *Lower Coal Measures* (No. XIII) from erosion. These (Mahoning S. S.) cover all the highlands from the Kanawha southward to Guyandotte mountain, whose lofty summits are capped and protected by them at an elevation of 3,000 feet above the sea.

From the lowest of these sandstones, Nos. 25 and 28 of the section, comes that splendid building stone on Elk river, above Charleston, that has been so highly commended by the government engineers.

THE COALS OF THE BARRENS (NO. XIV.)

In the section of the *Barrens* along the Kanawha river we find traces of five coal horizons, in descending order as follows:

Elk Lick.
Bakerstown.
Brush creek.
Upper Cannelton.
Middle Cannelton.

Of these, the three first represent well enough, in their stratigraphical relations, the beds which have received corresponding names in Pennsylvania, and the same are retained for them here; but the two last are new elements in the Barren series not hitherto noted elsewhere, and I have thus been compelled to give them names. The Elk Lick bed was observed only along Two-mile, where it is often a mere mass of bituminous shale, 1–2 feet thick. It has been dug into at one locality about three miles above the mouth of that stream, and is there an impure cannel 10–15 inches thick.

The Bakerstown coal comes immediately on top of the great sandrock group, and although it attains a thickness of five feet or more, yet in the region along the Kanawha it nowhere furnishes any coal fit for fuel, being generally composed of alternating layers of slaty coal, shale and fireclay, so that the whole is worthless stuff. This bed was once opened on Two-mile at the mouth of Sugar run, and also on the land of Hon. Wm. A. Quarrier, opposite Charleston, where it is 350 feet above the river.

The Brush creek coal is the persistent bed in the *Mahoning sandstone group* of Pennsylvania and Ohio, and it likewise proves the same on the Kanawha river. This coal comes up to the Kanawha below the mouth of the Elk, and rising rapidly reaches the level of the Chesapeake and Ohio railroad in a cut just opposite Elk shoals, one-half mile below Charleston station, where it exhibits the following structure:

Coal	0′ 6″	4′ 6″
Black, sandy slate	2′ 6″	
Coal	1′ 6″	

This coal is thin, irregular and of no importance in the immediate vicinity of Charleston, but as we go south from there to Porter's run (branch), three miles distant, it thickens up to 3′-4′ and has been successfully mined for local use, being known as the "*Joel Ruffner vein.*" Still further south in the vicinity of North Coalburg it swells up to an immense thickness, and is usually called the "*Big bed;*" it exhibits the following structure there at Mr. Lovell's opening:

1. Coal	1′ 6″	17′ 8″
2. Black slate	0′ 6″	
3. Coal, good splint	4′ 2″	
4. Shale	2′ 6″	
5. Coal	0′ 6″	
6. Shale	5′ 0″	
7. Coal	3′ 6″	

At another locality it shows the following:

1. Coal	2′ 0″	...15′ 2″
2. Dark slate	0′ 5″	
3. Coal, good	4′ 8″	
4. Shale	3′ 6″	
5. Coal, impure	4′ 6″	

No. 3 of these sections is the valuable portion of the *Brush creek bed*, since it is a "block" or "splint" coal of very fair quality. It has not been mined for shipment heretofore because of its inaccessibility, occurring as it does in the tops of the hills 750′-800′ above the Kanawha river.

This bed, which is nearly always a *splint coal*, will doubtless furnish a considerable quantity of valuable fuel in the region southwest from the Kanawha, since at the head of Cabin creek it exhibits 5′ of good coal in one bench, while on Huff creek mountain, near Guyandotte river, in Wyoming county, it is reported as 10 feet thick. This also seems to represent one, or perhaps two, of the beds of *splint coal* reported along Elk river, since it is double or triple nearly everywhere.

The Brush creek bed is overlaid by a white or yellowish white sandstone, so hard and silicious as to be totally unlike any other rock in the XIV series, thus rendering its recognition easy.

Occasionally one or two streaks of coal make their appearance above the sandstone just mentioned, but as they are local and sporadic, and moreover belong to the general horizon of the *Brush creek bed* as represented in Pennsylvania and Ohio, I have not given them a separate designation. Should it be found hereafter that they attain workable dimensions (as they may possibly do on Elk river), then they may receive separate names.

The Brush creek coal comes about 125 feet above the base of XIV in the vicinity of Charleston, but at Coalburg this interval is increased to nearly 200 feet.

The Upper Cannelton coal, as previously stated, is an interloper in the No. XIV series as known elsewhere, and I have designated it from the locality where it has long been mined, viz, Cannelton. It has been mined here by the Cannelton Coal Company at 75 feet above the black flint and 850′ above the Kanawha river, under the name of No. 5 (it being the fifth coal bed above water level there). It is an excellent quality of *splint*, having been used successfully in the raw state for smelting iron ore. The entire bed is about six feet thick, but the upper portion is split up with partings, so that only 4½′ of good coal is obtained from the bed.

Near the mouth of Armstrong creek, at an elevation of more than 1,200 feet above the Kanawha river, this bed shows a thickness of 54″ of clean coal on the property of Mr. Wyant. It is also the uppermost bed on the Mt. Carbon coal property, one mile above.

Followed northward from Cannelton, this coal becomes thinner and poorer, in quality, and in the vicinity of North Coalburg is only

3½′-4′ thick, with two slates 2″ and 4″ thick respectively, so that it is not there regarded as a workable bed. Farther north, at Charleston, it is just on the point of disappearing, since in the cliffs opposite the station its place is marked only by a vast quantity of vegetable debris scattered through 10′ of sandstone, though one mile up Elk, near the mouth of Coal branch, it comes in as a sulphurous seam ½′-1′ thick, to disappear in coaly fragments again in the middle of the great sandstone quarry just around the point of the hill.

The name, *Middle Cannelton coal*, has been given to a valueless seam which immediately overlies the "Black Flint" and seems to be rather persistent. A trace of this bed may be seen in a coaly stain along the Chesapeake and Ohio railway, a short distance above Charleston station. In the vicinity of Coal Valley, Faulkner and Eagle, thirty miles south from Charleston, this coal streak has thickened up to three feet, but being slaty and worthless has never been mined.

The "Black Flint" ledge, at the base of the Barren Measures (No. XIV), is one of the most characteristic rocks in the Kanawha valley, and although perfectly worthless in an economic sense, yet as a guide to the geologist and mining engineer, it is invaluable, since it furnishes the best possible datum line by which to trace and keep hold of the important coal beds which underlie it in No. XIII. This stratum is usually of dark gray or blackish blue color, and exhibits every gradation between regular massive flint and sandy shale. Its horizon rises from the bed of Kanawha river just about opposite the Charleston depot of the Chesapeake and Ohio railway, and not at Elk shoals, as has been sometimes stated; in fact, it is very doubtful if the *flint* could be found at Elk shoals if a shaft were sunk to its horizon, since it disappears from view, gradually changing into a mass of arenaceous shale about one-half mile above Charleston station in a cut of the Chesapeake and Ohio railway, and as it is absent as *flint* on the north bank of the Kanawha river, just opposite this point, I think it quite possible that it does not extend much farther north than Charleston. No microscopic examination of this rock has been made with reference to its origin, but the occurrence of the fossils *Discina sp. Productus Nebrascensis* and *Spirifera camerata* in it at several localities would prove that it is a marine deposit beyond question, and when examined microscopically it will doubtless be shown that its *silex* has been derived from the same sources as the *chert* in limestones, viz: from the silicious skeletons of *diatoms* and *protozoa*. But whatever its source, it appears to be confined to the immediate region of the Kanawha valley, since after we leave the river 5–6 miles on either side, it disappears, being gradually replaced by sandy shales. This stratum varies in thickness from 4′-10′, and although of such insignificant thickness, has played an important part in shaping the topography of the region where it is found, since, being almost indestructible by ordinary atmospheric agencies, it has preserved many surfaces at a great elevation that would other-

wise have been leveled by erosion. The cap of Lower Coal Measures (XIII) caught in the summit of Gauley mountain at Ansted is due to its protecting cover. Through the agency of heat and cold and the general warfare of the elements, it is finally broken up into oblong, quadrangular pieces, of small size, which cover the surface and line the stream beds wherever its outcrop extends. No deposit of like kind has yet been reported from this horizon in Pennsylvania or Ohio, though the fossils held by the "Black Flint" are common in the shales which there intervene between the base of the *Mahoning sandstone* and the *Upper Freeport coal.* Prof. Stevenson also reports a bed of *chert* in the roof of the *Upper Freeport coal* in the "Oil Break" on the Little Kanawha river and its tributaries.

This flint, when impure or shaly, contains a large quantity of *iron pyrite*, and its oxidation gives rise to "Alum Springs," of which a very fine one exists about one mile above Charleston, on the north bank of the Kanawha.

Sometimes the "Black Flint lies" immediately on top of the next succeeding coal bed, the top of No. XIII, but more frequently 5′-25′ of shales or sandy beds intervene before we come down to the base of the Barrens.

THE LOWER COAL MEASURES (NO. XIII.)

The measurement of these rocks as given in the section, (Nos. 33-56), shows a thickness of 976 feet, but this is not the maximum, since at the latitude of Armstrong creek, a vertical measurement gives them a thickness of 1,100 feet. When it is stated that these rocks never exceed 200 to 250 feet at the northern boundary of West Virginia, and that the maximum in Western Pennsylvania is only 350 feet, while in Ohio it is much less, the great change which has taken place in the series along the Kanawha river may be more fully appreciated.

With this immense thickening of the rock intervals of No. XIII to more than four times their average size in Pennsylvania and Ohio, we would naturally at first thought expect to find a greater number of workable coal beds, but the following list of the beds in Western Pennsylvania and on the Kanawha will show a different result:

PENNA. COALS.	KANAWHA COALS.
1. *Upper Freeport.*	1. *Lower Cannelton.*
2. *Lower Freeport.*	2. *Coalburg.*
3. *Upper Kittanning.*	3. *Winifrede.*
4. *Middle Kittanning.*	4. *Cedar Grove.*
5. *Lower Kittanning.*	5. *Campbell Creek*
6. *Clarion.*	6. *Eagle.*

Or in other words, there are within the 250 to 300 feet of Lower Coal Measures (No. XIII) in Western Pennsylvania six beds (leaving out the *Scrub-grass* and *Brookville*, which are synonymous with *Clarion*), that at one locality or another furnish workable coal, and

in the Kanawha valley, as shown by the above list, (from which are likewise excluded mere local streaks and splits from other beds,) with its 1,100 feet of No. XIII, we find only the same number (6) of workable coals.

Prof. Orton, State Geologist of Ohio, has recently shown that these six coal beds of Pennsylvania can be traced bodily across the Ohio coal field to the Hanging-rock region and on into Kentucky, and that no other workable coal beds are found within the limits of the group, and my own work in Northern West Virginia (Monongalia, Preston, Mineral, Grant and Tucker counties) reveals the same state of affairs there, so that, however improbable it may appear at first, there is really scarcely any doubt that the six great coal marshes which gave us the workable beds of No. XIII in Western Pennsylvania and Ohio, also spread across West Virginia, and furnished the six workable coal beds that we find along the Kanawha valley. The evidence for the truth of this proposition will be fully given in my detailed report, and it is so strong that I feel little hesitancy in replacing the Kanawha local names as given in the above list with what appear to be their Pennsylvania equivalents, and I do this the more readily since Prof. Orton, State Geologist of Ohio, in his recently published Vol. V. of the Ohio Survey, has fully adopted the Pennsylvania nomenclature. The advantages to be gained from this unity of nomenclature in the Apalachian coal field, are so obvious that I could not forbear introducing it into the Kanawha valley, since all the benefit of local names can be had by retaining their synonymy in the general section. Hence, although future work may reveal some errors in this first attempt at correlating the Kanawha coal beds with the Pennsylvania series, yet such errors can be corrected much more easily than new names can be introduced after the local ones have become thoroughly established without reference to their synonymy elsewhere.

In these six beds, then, are stored up all the valuable fuel found in what is generally known as the Great Kanawha coal field.

This field stretches along the Kanawha river from Charleston to the mouth of Gauley, a distance of 40 miles by the meanders of the stream. The highest bed of coal in the group rises above water level at Charleston, and at Gauley river the lowest one (Clarion Eagle) just overshoots the mountain tops.

It must not be supposed, however, that all of these six beds furnish valuable coal along this entire distance. Far from it; for while all of these coal horizons, with the exception of the lowest (Clarion), are accessible above water level for 35 miles out of the 40 miles of outcrop between Charleston and Gauley river, yet at no single locality along the river are there more than two of the six beds successfully mined on the same property now, or ever have been. Many years of mining industry in the Apalachian coal field have enforced the lesson on geologists as well as capitalists that however regular or persistent a given bed of coal may be in one region, when traced into

others either near or remotely distant, it becomes patchy and interrupted, or too thin to mine, while very often a coal horizon above or below the latter, worthless where the first was valuable, may often become workable when the first thins away. In fact there is nothing like perfect regularity in the thickness or quality of any single coal bed over large areas in any coal field. *The Pittsburg bed* in western Pennsylvania, seems an exception to this statement, since it is persistent over such a wide area, but, as the writer has already shown, even this bed, when traced into central West Virginia, becomes thin, worthless, and is often absent entirely from large areas. A too implicit trust in the persistency of coal beds has already proven disastrous to many capitalists who have made investments in coal fields, and the Kanawha valley has proven no exception in this respect.

The worst possible service that a geologist can do for any coal field is to exaggerate its value. Many are sure to be disappointed because of such exaggeration, and the reaction is such that really valuable properties suffer depreciation along with the worthless.

The Kanawha coal field has not escaped from the tendency of first explorers to take a "rose colored" view of mineral properties, and this field, rich as some portions of it undoubtedly are in valuable coals, is suffering to-day from the unintentional exaggeration of its too zealous friends.

It was once (and is yet in some localities) the common opinion that the *Lower Coal Measures* (No. XIII) in the Kanawha valley would everywhere yield from 30 to 50 feet of merchantable coal, but several years of practical mining there have shown quite a different result; for the best properties in the valley do not yield more than 10 feet of merchantable coal from No. XIII; a much larger area yields only 5′, and a considerable territory practically none.

A prominent characteristic of all the six beds of XIII, in the Kanawha valley is their variableness, both in thickness and quality. A certain bed may prove excellent on one property, and on the adjoining land thin away to a streak, be split up with partings, or disappear entirely, and as this may happen to every one of the six beds it results that seldom more than two are workable on the same property, and sometimes none. It is a common belief of the miners that when one bed is good, the coal next above and below will prove worthless, and experience, as a rule (although there are exceptions), confirms the general truth of the proposition, strange as it may appear.

The cause of all the irregularities in the Kanawha coal beds must be sought in the rapid subsidence and deposition of sediment by which 1,100 feet of rocks accumulated there in the same time that 250 to 300 feet accumulated in Ohio and Pennsylvania. This accounts satisfactorily for all such phenomena as the splitting of coal beds by shale and rock deposits; their thinning away and disappearance over wide areas; the fact that one or two good beds are found in the

same hill; and all other features by which this region differs from other coal fields of the country.

These are some of the disadvantages of the Kanawha field that have not hitherto been dwelt upon to that extent which the facts demand in order that the land owners as well as those seeking investments in coal properties may be well informed as to the value of the same.

On the other hand, the Kanawha field has many features that give it great advantages over the other coal regions of the country. In the first place, it has all the principal kinds of bituminous coal, viz: cannel, gas, splint and coking varieties, a combination exceptional anywhere else. Then its proximity to market and cheap transportation facilities (a slack-water river free from tolls), are advantages not to be despised. Besides, it must be remembered that there are scarcely any bituminous coal fields in the country where more than ten feet of merchantable coal is accessible, while five is a fair average, the famous Monongahela region furnishing only the latter quantity.

It should also be stated that the barren regions where the coal is wanting along the Kanawha, seem to come in belts of greater or less width, and can therefore (with ordinary business foresight), be avoided by the investor.

In order to be sure of the value of coal property on the Kanawha, it is necessary to be more thorough in exploitation than elsewhere. It will not do to simply expose the face of the bed in one or two localities; the property must be girded with at least a dozen openings, and the entries driven in, not a few feet, but a few hundred, before any certain conclusion can be drawn as to the actual amount of merchantable coal the property contains.

As my work during the past season has consisted largely in studying out the stratigraphy of No XIII in the Kanawha valley, not much time could be devoted to the study of the economic value of the different seams, and as no analyses have yet been made, this subject will be only incidentally referred to in the following brief account of the six main seams found in the No. XIII measures.

I. THE UPPER FREEPORT (LOWER CANNELTON) COAL.

This highest member of the No. XIII coals rises above the Kanawha river near the Charleston ferry, where it has a thickness of 3 to 4 feet, including parting slates, and is in structure about half way between cannel and ordinary bituminous coal. It seems to contain rather too much sulphur, and hence is not mined except for local use at a few points, though it formerly furnished a considerable quantity of fuel to the salt furnaces between Charleston and Malden. About one mile and a half above Charleston, this coal shows a curious case of splitting up by the thickening of interstratified shales, a feature so often noted in the Kanawha coals. On the north side of the river, near the "Alum Spring," the bed shows a total thickness of 5′ 8″ with two parting shales, but on the opposite side of the river,

just one mile distant, the lower parting, which is only one foot thick on the north side, has thickened up to 20 feet, and the lower "split" is mined as a separate bed at the mouth of Porter branch.

About four miles above Charleston this coal thins away to only a few inches of worthless stuff, and we get it no more in workable condition until Coalburg is reached, 19 miles above Charleston, where we find two benches of this coal separated by 25 to 40 feet of rocks. The lowest bench is 3 to 4 feet thick, and has long been called the "Lewiston seam," under the mistaken idea that it was the same bed as that once mined extensively at Lewiston or Winifrede Junction, on each side of Fields creek. The upper bench is 2½ feet thick at North Coalburg, according to Mr. C. C. Lewis, but neither it nor the lower one has been mined in that vicinity, the lower bench being too impure, and the upper too thin. However, at the Crown Hill mines, below Paint creek, the upper bench seems to have thinned away, and the lower one has developed into an excellent quality of "splint" coal, 3 to 4 feet thick. This same bed has recently been opened for Mr. Buck, at East Bank mines, near Hampton, where it is 35 feet under the "Black Flint" ledge against 25 at Crown Hill. In the river bluff below the mouth of Hughes creek, this bed attains a thickness of 5½ feet, the most of which appears to be good "splint," but as we go further up the Kanawha it gains quantity at the expense of quality, and in the vicinity of Upper creek, on the Kanawha Mining Company's property and others, it attains a thickness of 11 feet, but the little good coal is so interstratified with worthless stuff as to be valueless. At Cannelton, two miles above where it shows such an enormous thickness, it undergoes another great change, and we find its lower half developed into 1½ to 4 feet of most excellent cannel, while 2′-2½′ of bituminous coal rests immediately on top of the latter. The coal has long been mined here, and has received its local designation of "*Stockton cannel*" from the former owner of this property. In this paper it has been termed the *Lower Cannelton bed*, since it becomes necessary to designate two beds (Upper and Middle Cannelton) in the Barrens (No. XIV) from the same locality.

As we pass on up the Kanawha from Cannelton, this coal thins away again to a thin bed of worthless stuff, and is mined no more, though its outcrop does not pass into the air until we pass Mt. Carbon.

That this Lower Cannelton bed is the representative of the *Upper Freeport coal* of the Pennsylvania series, there can be no reasonable doubt.

2. LOWER FREEPORT (COALBURG) COAL.

The next coal bed below the one last described is known in the Kanawha valley as the *Coalburg seam*, from its development at the village of that name, nineteen miles above Charleston. Its interval below the *Black Flint* varies from 30 to 130 feet, but at Coalburg, its

typical locality, this distance is 90 to 100 feet. The rocks between it and the *Upper Freeport coal* consist of shales and massive sandstones, and their thickness runs all the way from 5 to 100 feet. Since this bed corresponds stratigraphically to the *Lower Freeport coal* of the Pennsylvania series, it has been provisionally identified with that bed.

The *Lower Freeport* or *Coalburg bed* is always double, and sometimes triple, as seen at the old Brooks mine on Black Hawk run, three miles above Charleston. Where this bed rises above the Chesapeake and Ohio railway, one-fourth of a mile south from the Porter branch, it is split into two or three worthless layers by twenty-five to thirty feet of sandstones and shales, and these partings do not thin out and bring the separate layers of coal close enough together to warrant mining until we come to the neighborhood of the Daniel Boone salt works, three and one-half miles above Charleston. Here this coal is mined in three benches, each 12-24 inches thick, and separated by rock layers of 2-24 inches thickness. The coal is known as the *Brooks vein*, and is mined for use at the salt furnace, its interval below the *Black Flint* being about 75 feet. As we pass up the river from the Boone salt works, the coal again becomes worthless along the river hills by the great thickening of its partings, but at the Snow Hill salt works we find the partings thinned away to a small thickness, and the bed again workable, though not until we go one and one-half to two miles back from the river hills. This same productive belt seems to stretch through to the first branch of Campbell creek, along a tributary of which this coal has very much the same structure as seen at Snow Hill and Boone mines. From this point on up the Kanawha, however, the bed splits up and is worthless until we come to Coalburg, the region of its greatest development. Here it has been successfully mined for a long time on both sides of the river, and is characterized by the following structure, from above downward: Splint coal, 6″-10′; "Nigger head," 4″-8″; splint coal, 2½′-3½′; shale, 1′-8′; soft coal, 1′-1½′.

The term "Nigger head" is used by the Kanawha miners to designate a hard, heavy, impure coal often resembling cannel, which to the unpracticed eye can scarcely be distinguished from genuine coal, but which on the fire refuses to burn up and remains as a solid block after its carbon has disappeared. It evidently owes its origin to an invasion of the old coal marsh by sediment (fine sand and clay). The Kanawha coals are much injured in value by this substance, since it occurs to a greater or less extent in the upper three beds of No. XIII, and its removal is necessary, however troublesome or expensive it may be. The great heaps of refuse about Coalburg and other mines along the Kanawha, are composed largely of this material.

The Coalburg bed continues up the Kanawha river from Coalburg in rather fair development, with only occasional barren patches, until we come to within two or three miles of Cannelton, when it again deteriorates and becomes worthless, although exhibiting a thickness

of 5-6 feet on the Cannelton Coal Company's property. Here it likewise shows one of the curious changes in its interval below the coal next above (Upper Freeport). At one locality on the Cannelton Coal Company's property, it is only 10 feet under the cannel bed (U. F); 275 feet from this shaft showed the interval increased to 26 feet, and further in a boring revealed 30 feet of separating material, while on the opposite side of the hill the same interval measured 75 feet at the outcrops of the beds, only a few hundred yards from where it was only 10 feet. At one locality on this property the interval decreases to 5 feet, as I am informed by Mr. Davis, the superintendent.

The outcrop of this bed passes into the air near the mouth of Loup creek, but the coal has there thinned away almost entirely.

At the head of Cabin creek it exhibits 5 feet of clean coal with 2′ 8″ of shale and coal under the latter, and then 5′ of shale succeeded by 20″ of coal.

I also recognized the same coal on Huff creek, in Wyoming county, where it is 400 feet above the *Lower Kittanning coal* (Campbell creek), and has a thickness of 3′ 4″, of which 4″ is "Nigger head" at 10″ below the top, and it is there a "splint" coal as usual.

3. THE UPPER KITTANNING (WINIFREDE) COAL.

At an interval below the "Black Flint," varying from 150 to 235 feet, but which is usually about 165, we come to the third important *coal horizon* of the No. XIII measures, and since it is very extensively mined near Winifrede, on Fields creek, a tributary of the Kanawha, 13 miles above Charleston, it has been locally designated from that village. Its stratigraphical position is within the *Freeport sandstone group* of Pennsylvania, and as this corresponds to the horizon of the *Upper Kittanning coal* of that State, I have correlated it with the same. Its irregular distribution very much resembles the "*Eichenar*" *coal* of western Butler county, which I have always considered a representative of the true *Upper Kittanning*, the *Darlington cannel* being the *middle member* of the Kittanning series.

The Winifrede bed is usually a mixture of "spiint" coal layers interstratified with richly bituminous ones, the whole making a domestic fuel of excellent quality. The "splint" coal in this bed often has a physical structure resembling cannel, but possesses a grayish color, and hence is usually termed "gray splint."

The structure of this bed at its typical locality, near Winifrede, is as follows:

Gray Splint	5″	4′ 10″
Bituminous coal	5″	
Gray splint	3″	
Bituminous coal	3″	
Gray splint	2″	
Bituminous coal	15″	
Slate	4″–6″	
Coal	16″–24″	

This same coal was once mined at the mouth of Fields creek under the name of "*Lewiston*" coal, which designation was subsequently, by a singular error in identification, transferred to the *lower "split"* of the *Upper Freeport coal* in the vicinity of Coalburg and elsewhere in the valley.

This bed is frequently characterized by having a "rider" coal 6″-12″ thick at 5′-20′ above it, and generally a companion coal, slaty and impure, at 20′-40′ below, but as neither is ever valuable, and both are often absent, I have regarded them as belonging to the same general horizon as the *Winifrede bed*, and have not dignified either with a separate place or name in the series.

The Upper Kittanning, or *Winifrede bed*, first makes its appearance along the Kanawha at the mouth of Wilson run, 2½ miles above Charleston, where it is 45 feet above the river and only 18″-20″ thick and 150′ under the *Black Flint ledge*. On the opposite or south side of the river here, it thickens up to about 3 feet and was once mined for the salt furnaces under the name of the "*Point*" *seam*. It also appears to be this bed which was once wrought in the hill above Malden station, to which the old incline leads, where it is 235 feet under the "Black Flint," being thrown so far below the latter by the great sandstone deposits between the two horizons. It has long since been abandoned in this region however on account of its small thickness and large amount of impurities, so that it really does not attain workable dimensions until we come to the vicinity of Fields creek. A short distance above this stream Mr. Macfarlane now mines it on the north bank of the river, where it is 230′ under the "*Black Flint*" and a most excellent coal.

In going up the river from Macfarlane's, however, it thins down and when we come to Coalburg, where the *Coalburg bed* is well developed, we find the *Winifrede seam* represented by 4′-5′ of coaly slate interstratified with thin seams of *iron ore* (Lewis). Occasionally this bed develops into an impure *cannel*, as at Brownstown, and in such cases it nearly always shows some included layers of *black-band iron ore*, in fact Capt. Hovey, of the Davis Creek Coal and Iron Company, thinks the Davis creek *black-band* comes at this horizon. This is possible, since the same coal also exhibits *black-band* on Witcher creek.

On up the Kanawha river in the region of Upper and Morris creeks, this coal comes in again about the time that the *Upper* and *Lower Freeport beds* (Lower Cannelton and Coalburg) have become worthless. This is the bed at the Kanawha Mining Company's works, from which the C. & O. railway engines receive their supplies. At Coal Valley, however, one mile above the latter locality, the bed has all disappeared except 15″-20″ of worthless stuff which remains at its proper horizon, and it does not thicken up again to a workable condition before the horizon passes into the air above Loup creek. This coal also shows a good development on Hughes creek, about 4 miles up the waters of that stream. Judged with reference to its

Pennsylvania equivalent (Upper Kittanning) the *Winifrede bed* is likely to prove less constant in its distribution between the Kanawha and Big Sandy rivers than any of the other coal beds in No XIII.

4. THE MIDDLE KITTANNING (CEDAR GROVE) COAL.

Below the last described coal, we find a succession of sandstones and shales in which we get only thin streaks of coal, and none of any productive value until an interval of 200 to 250 feet has been passed, when we come to a small but very pure bed of splint coal that has its productive development between Simmons creek and Kelley creek, since the bed in question gets too thin for mining both north and south from these points. This is the highest bed of No. XIII with which we find an abundant *fossil flora* associated. A great wealth of beautiful ferns is found in its roof shales, many of which are identical with those found in connection with the *Darlington (Middle Kittanning) bed* of Western Pennsylvania, and on this account, reinforced by its similar stratigraphical position, it has been provisionally correlated with the latter coal. It is extensively mined in the vicinity of Cedar Grove one mile below Kelley creek, and has received its local name from that village. Here, as well as elsewhere, it usually has a "rider" coal 3″-4″ thick which occurs in its roof 4 inches to 15 feet above the main coal. The latter is free from slate or partings of any kind, but only 2′ 8″—3′ 4″ thick. It furnishes a splint coal of very good quality, though it is difficult to mine, since the only soft coal in it is a few inches at its very top.

This coal first rises above the bed of the Kanawha river about one-half mile below Campbell creek, and at the mouth of this stream it shows a thickness of 16″-18″, and was once mined to a small extent, being called the "*Trimble*" or "*Arno*" *vein*. Its interval above the *Lower Kittanning*, or next lower coal, is there only 40′-50′, but as we proceed up the river, this increases to more than 100 feet in the vicinity of Simmons creek, and the coal at the same time develops into a workable bed, having a thickness of 40″ pure splint, and being underlaid by a bed of good fireclay which on Witcher creek is about 3 feet thick.

This coal seems to disappear almost entirely in the vicinity of Cannelton, and northward, or else it thins to a mere streak.

The *Middle Kittanning bed* (Cedar Grove) is now mined at only one locality on the south side of the Kanawha river, viz: The Marion mines, at Blacksburg.

CAMPBELL CREEK LIMESTONE.

In the shales which separate the last described coal from the one next below we often find a layer of impure limestone in disconnected, lenticular masses, which exhibit the curious "cone-in-cone" structure. It makes its appearance first along Campbell creek, and has been designated from that locality. It seems to be quite persistent, since it is seen wherever its horizon is uncovered as far up the Ka-

nawha river as Loup creek, and Mr. Page gives a limestone in his Gauley mountain section, near Ansted, which is identical with it.

5. LOWER KITTANNING (CAMPBELL CREEK) COAL.

The next coal bed in descending order is one that has long been successfully mined on Campbell creek, in the vicinity of Malden, and it is generally known in the Kanawha valley as the *Campbell creek bed.* In stratigraphical features it seems to accord well with the *Lower Kittanning coal* of the Pennsylvania column, and it has been put down provisionally in my general section as identical with that bed.

This is the most persistent of the No. XIII coals in the Kanawha valley, agreeing in this respect with its equivalent in Pennsylvania, the *Lower Kittanning coal* being seldom absent from the section there. It is true that on the Kanawha this bed is not constantly workable, still it is not because it has disappeared, like some of the other beds, but because it has been split up into several layers by the thickening up of partings.

The study of this coal bed in its various phases, from the time it rises above water level at the mouth of Campbell creek, five miles south from Charleston, until it passes into the air at the Ansted mines on Gauley mountain, forty miles distant, reveals many chapters in the history of coal making in the Kanawha valley.

In the Campbell creek region this bed is from 4 to 6 feet in thickness, and is usually sub-divided into two benches by two slates, of which the lower is always thickest, the upper indeed being often absent entirely. The lower slate is seldom less than 6″-8″ thick, and in some directions thickens so fast that the lowest bench of coal cannot be mined, while the upper slate is not often more than 2″-4″ thick. As we pass up the Kanawha beyond Malden, however, these slates begin to thicken up and others make their appearance until the upper and lower members of the bed are separated by 20′ of shales, in which a third layer of coal is generally found. This expansion of the bed continues until in the vicinity of the Peerless Coal Company's mine, ten miles above Campbell creek, it is spread through the enormous amount of rock material shown in the following section:

1. *Middle Kittanning coal*	2′
2. Fireclay	3′
3. Concealed	35′
4. Shales and concealed, containing Campbell creek limestone	35′

5	*Coal*, upper member of C. C. bed	0′	11″	Lower Kittann'g. (Camp. C.) coal.	
6.	Shaly sandstone and shales	13′	0″		
7.	*Coal*	1′	1″		
8.	Shales and concealed	20′	0″		
9.	*Coal*	0′	8″		
10.	Concealed	20′	0″		
11.	Sandstone and sandy shales	5′	0″		
12	*Coaly shales*	1′	0″		
13.	Blue shales full of fossil ferns	8′	0″		
14.	*Coal*, Peerless	2′	7″	97′	0″
15.	Sandy shales and sandstone	8′	0″		
16.	*Coal* and *coaly shales*	1′	4″		
17.	Shale	10′	0″		
18.	*Coal*, *bony* at top and bottom	1′	6″		
19.	Shale	0′	8″		
20.	*Coal*	0′	2″		
21.	Shale	1′	3″		
22.	*Coal*	0′	10″		
23.	F. C. and shales			1′	6″
24.	Massive sandstone visible	10′			

The only layer of coal that can be mined in this 97 feet of rocks is No. 14, which is here a very superior gas coal, that has recently been opened up for shipment by Messrs. Hale & Hallwood, under the name of *Peerless coal.*

The same portion of the Ca npbell creek bed is also mined by Mr. Carkin, two miles above Malden station. To understand the cause of this great splitting up of the *Campbell creek bed*, we must remember that at Snow Hill, three and one-half miles above Charleston, where Dr. Hale sunk a shaft to this coal, the interval from it to the *Black Flint* is only 375 feet; but here at the Peerless coal works this same interval, measured from the bottom member of the *Campbell creek bed*, has increased to about 550 feet, or a thickenieg of (550 — 375 feet) 175 feet, and, as may be seen from the section, nearly half of the swelling out of the measures has taken place within the limits of the *Lower Kittanning coal.*

That this was partly due to *local* subsidence we know, for when we go on south to the Coal Valley region, where the interval from the base of the Lower Kittanning coal to the Black Flint has thickened up still further to 640 feet, these rock intervals which separate the members of the coal so widely at the Peerless mines, have thinned almost completely away, and on Morris creek the several components come practically together again and form a bed 10 feet thick.

The lower half of the Campbell creek bed remains worthless after we pass one mile above Malden until the neighborhood of Blacksburg is reached, when the separate members fuse together and form a bed of coal four feet thick. This is often called the *Blacksburg coal*, but it is only the lower half of the *Campbell creek bed*, or that portion of this bed which lies below the *Peerless member.*

This is also the condition of affairs with the *Coal Valley gas vein*, since it includes only that portion of the *Campbell creek seam* which ies under the *Peerless bed*, the latter being separated from the *Coal*

Valley seam by a thickness of shale too great to take down. On the Mt. Carbon property this shale thins out at one locality, and lets the *Peerless* and *Coal Valley seam* come within 2-3 feet of each other for a short distance. The same thing has taken place at Ansted on Gauley mountain, where the so-called "11-foot bed," now mined and coked by the Hawks' Nest Coal Company, is simply the *Campbell creek bed* with the shale partings between the several members reduced to a few inches.

At the head of Cabin creek the *Peerless* and upper half of the *Coal Valley* portion of this bed come entirely together, and form a splendid bed of gas coal 5½ feet thick, from which the lower half of the *Coal Valley portion* is separated by 3-15 feet of shales.

In the neighborhood of Oceana, Wyoming county, this coal has a good development, being generally triple beded, the two lower benches alone being workable, and having a combined thickness of 4′-5′ of good coal.

Below this bed along the Kanawha valley we generally find a massive sandstone (Kittanning) and under it a thin coal is often present but never attains workable dimensions.

FERRIFEROUS (CANNELTON) LIMESTONE.

At seventy-five feet under the *Lower Kittanning coal*, a bed of *silitious limestone* makes its appearance, and seems to be quite persistent along the valley, since it is found wherever its horizon is exposed. It was once burned for cement at Cannelton by Mr. Stockton, and hence is often called the "*Stockton*" *limestone*. It is never more than 30″ thick, very frequently exhibits the "cone in cone" structure, and sometimes occurs in lenticular masses, separated 1′-10′. The bed is not fossiliferous so far as I have observed, but it seems to represent pretty fairly the *Ferriferous limestone* horizon of Pennsylvania, and for the present it is correlated with that bed under the name of *Cannelton limestone*. It makes its first appearance above the Kanawha at the mouth of Rush creek, where it is brought up to railway level by the *Brownstown axis*.

6. CLARION (EAGLE) COAL.

At 30′-45′ below the limestone last described we come to the lowest bed of coal in No. XIII that attains workable dimensions on the Kanawha river. Regarding the *Cannelton limestone* as representing the *Ferriferous* of Pennsylvania, this coal would harmonize with the *Clarion* of that State. The bed in question has been extensively developed at the Eagle mines, two miles above Cannelton, where it has proven a superior coking coal, and hence is generally known along the valley as the "*Eagle seam*." It is also successfully mined at Frederick, the next station below Eagle. Its structure in this region is as follows:

Coal	14″	4′ 9″
Shale	3″	
Coal	3″	
Shale	3″	
Coal	34″	

In passing down the river from Frederick to Cannelton, the upper bench of this coal disappears, and the lower is reduced to 24 inches, where it disappears from view on Morris creek. As we go up the river the upper bench does not disappear, but the intervening shales thicken up and at Mt. Carbon have become 15-25 feet, while the lower bench retains its usual thickness of 34 inches. The upper "split" from this bed would represent the *Scrub Grass coal* of Pennsylvania.

The *Brownstown axis* brings this coal a few feet above the Kanawha river, and the piers of the Rush creek bridge rest upon it, but the surface deposits conceal it from view, and nothing definite is known of its quality there, though it is reported as 3 feet thick. The abutments of the Paint creek bridge are also reported as built on coal, and this would be the same bed brought to the surface again by the *Paint creek axis.*

Another small coal 18-20 inches thick is usually found at 20 feet below the *Clarion* (*Eagle*) *bed*, but as it never attains a workable size, the seam has not been dignified with a name.

PUTNAM HILL ("BLACK MARBLE") LIMESTONE.

At about 75 feet below the *Clarion coal*, or 200 under the "Lower Kittanning bed," another thin limestone rises above the C. & O. railway in the vicinity of the Crescent Coal works. It has a blackish color and hence has been locally called "Black marble" for a long time. It likewise exhibits the "cone-in-cone" structure and is underlaid by very fossiliferous shales, containing practically the same *fauna* that is always associated with the "Ferriferous limestone" in western Pennsylvania. Prof. Orton, of the Ohio geological survey, has shown, however, that the "Ferriferous bed" of Pennsylvania has a "double" in Ohio, known as the "Putnam Hill limestone," which contains the same fossils as the "Ferriferous," but underlies the "Clarion coal," and the "Black marble" of the Kanawha valley fits in exactly with this order.

Below the last described stratum we find 250-275 feet of shales and sandstones in which two or three thin beds of coal are sometimes found, but none of which have proven workable on the Kanawha.

A bed of richly *bituminous shale* also occurs locally, at 150-200 feet under the Clarion coal, and was once used in the manufacture of oil above Eagle.

Some *black-band iron ore* also occurs somewhere in the interval between the Clarion coal and the base of No. XIII, probably about the horizon of the little coal bed next below the Clarion. It is said to be of good thickness on the tributaries of Gauley river, but is unimportant along the Kanawha.

The *Davis creek black band* which occurs up near the top of No. XIII was not examined, and hence no special reference has been made to it in this paper.

THE POTTSVILLE (NO. XII) CONGLOMERATE.

At the base of No. XIII we come down to a series of rocks which although holding important coal beds, are so sharply set off from No. XIII by natural lines that any true system of classification will always retain the distinctness which the Rogers brothers gave them many years ago.

As has been shown by Profs. Fontaine, Stevenson and others, the *Pottsville conglomerate series* of rocks attain a development on New river (a continuation of the Kanawha), West Virginia, unequaled anywhere else in the country.

The top of No. XII makes its appearance in the bed of the Kanawha river, just above the mouth of Armstrong creek, and rising rapidly reaches an elevation of 200 feet above the same in the vicinity of Loup creek, but in ascending the river from this point the course of the stream turns north and at Kanawha Falls the top member of XII comes down again, and almost disappears under the Kanawha between the Falls and the mouth of Gauley river. South from this it rises rapidly and makes the walls of New river canyon until its lowest members pass into the air, near Quinnimont.

The uppermost member is a great pebbly sandrock which makes a constant line of cliffs from the Kanawha Falls southward until it passes into the air near Caperton. This stratum is usually known as the "*Falls*" *sandstone*, along the Kanawha valley. It is 150 to 175 feet thick, and corresponds to the *Homewood sandstone* of the Pennsylvania series.

A small coal bed is often seen directly under it, but at no locality does the coal obtain workable dimensions.

The productive coals of the No. XII series are three in number, viz:

1. *Nuttall.*
2. *Quinnimont.*
3. *Fire Creek.*

These coals of No. XII are sharply distinguished from those of XIII by their excellent coking qualities. Of the six coals in XIII only one, the lowest, or *Clarion*, has coking qualities in the Kanawha field, while of the three No. XII coals given above, all are coking coals.

1. NUTTALL COAL (SEWELL).

The above name has been given to the first workable coal bed that we get in descending from the top of XII on New river. It has been mined successfully for several years at Nuttall station on the Chesapeake and Ohio railway, and the coal is designated from that locality. Its geological horizon on New river varies from 400 to 425 feet below the top of XII.

For regularity and persistency this bed seems to surpass any of the coals of XIII, since it is never absent at its proper horizon after rising above New river, a short distance below Hawks' Nest station.

It is there, however, but 2 to 2½ feet thick, and has been mined to only a small extent. This bed increases regularly in thickness toward the south, and when we come to Stone Cliff, it has attained a thickness of 4½–5 feet. A curious mistake was made with regard to this coal by the early geological explorers along New river. In passing up the river from the vicinity of Caperton, the dip suddenly increases to 300–400 feet per mile, which carries into the air the great cliff rocks found above the *Nuttall coal* all along the stream below Caperton, while at the same time it brings up to a corresponding place in the mountains the massivs sandstones that begin 75 feet *under* the *Nuttall coal.* This rapid dip seems to have been unheeded and consequently the coal bed (Nuttall) in the summit of the mountain at Sewell and southward was identified with the lowest bed of the No. XIII coals, entirely above No. XII, whereas the truth of the matter is that the highest coal found at Sewell, Fire Creek, Stone Cliff, &c., is the *Nuttall seam*, a bed belonging 400 feet under the top of XII.

It is the same *Nuttall coal* which occurs a few feet above the top of the great cliff rock on the road leading from Prince station to Raleigh C. H., where it is 5–6 feet thick, and trends away toward the Flat-top region in a seemingly persistent bed. It is everywhere pure and free from admixture of slate, and a coking coal of unsurpassed excellence. Its productive development will be confined to a limited area, however, for on the Tug Fork of Sandy, near the mouth of Dry Fork, it has thinned down to only twenty inches, just as it thins away on New river below Hawks' Nest. Hence any expectation of finding this coal in workable condition by shafting on the Kanawha or Big Sandy rivers must be considered futile, since all the evidence goes to show that it accumulated in workable thickness only around the southern border of the coal field.

2 AND 3. THE QUINNIMONT AND FIRE CREEK COALS.

In the vicinity of Sewell station two more workable coals make their appearance in the No. XII series, the upper one coming about 300 feet under the *Nuttall bed*, and the other 100-130 feet lower. Both have been mined at Sewell, where they are each 3–4 feet thick, though quite irregular, the upper one thinning away entirely when followed into the mountain.

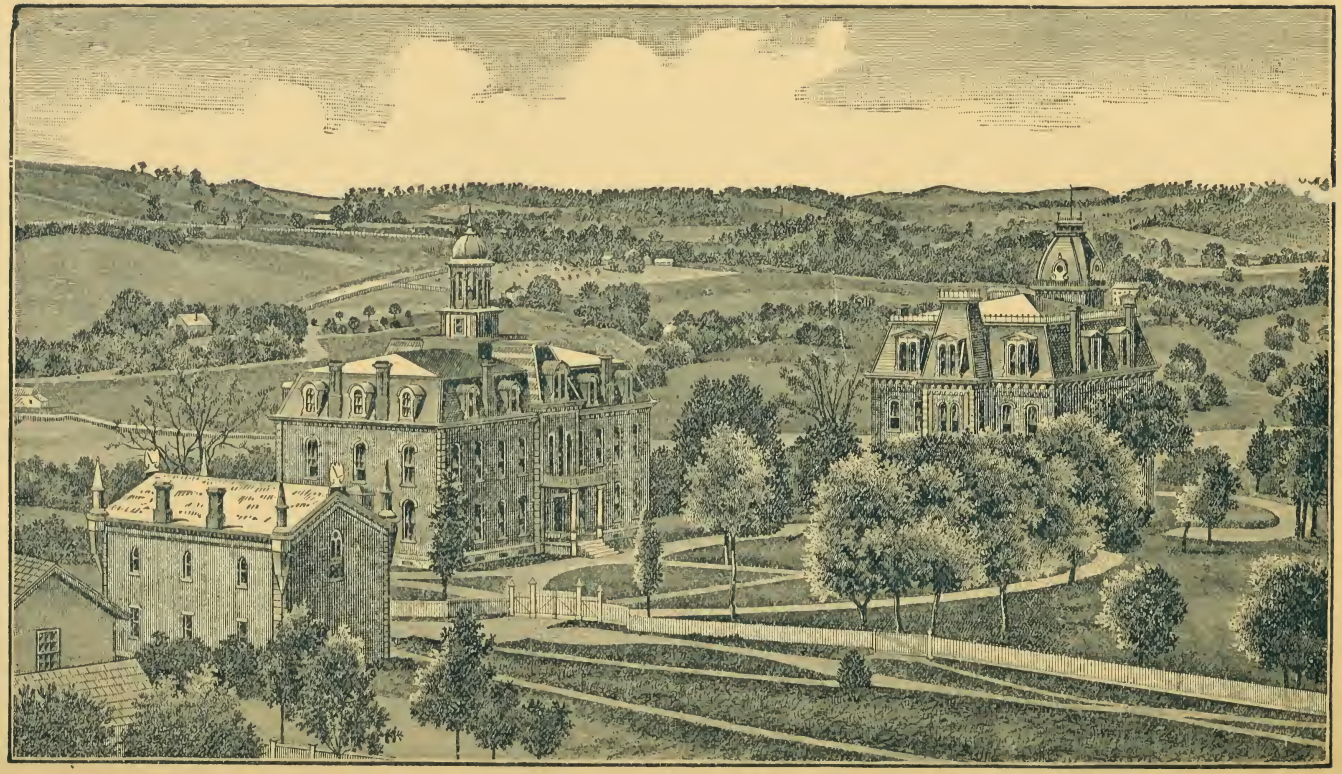
One of the beds has been extensively mined at Quinnimont and the other at Fire Creek, and they have been designated from these localities. The two beds are never well developed at the same time, however, and hence some doubt yet remains as to their relative positions, some coal operators contending that the "Quinnimont bed" is the *lower*, and others that the "Fire Creek" is. While inclining to the view that the "Fire Creek" is the lower one, I have left the matter open by inserting an interrogation after the names of these beds in the general section. It can only be determined by a careful study of the region when the leaves have fallen, so that the cliffs

can be kept continuously in sight between Fire Creek and Quinnimont.

Both are coking coals of excellent quality, though neither can compare with the Nuttall bed in regularity or freedom from impurities.

These coals, like the *Nuttall* above, are confined to the southern margin of the coal field, since although their horizons are above water level at Caperton and Nuttall we find them represented there by thin streaks only. They seem to thicken up southward very much however, for the great bed of Pocahontas, in the Flat Top country, appears to be identical with one of them as claimed by Maj. Hotchkiss.

No reference to the salt, lumber or other interests of the Kanawha valley has been made in this paper, from the fact that a limit of reasonable length has already been exceeded, in reviewing as briefly as possible the coal series.



CATALOGUE

OF

WEST VIRGINIA UNIVERSITY,

MORGANTOWN,

FOR THE YEAR 1885-6.

WHEELING:
JAMES B. TANEY, PUBLIC PRINTER.
1886.

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CALENDAR.

The University year includes forty-one weeks, and is divided into three terms.

The FIRST TERM begins on the first Wednesday of September, the second on the fourth Wednesday of November, and the third on the second Wednesday of March.

The ANNUAL COMMENCEMENT is on the second Thursday of June.

Prompt attendance at the beginning of each term is very important to the student.

1886.

June 6th—Sunday, 11 A. M.—Baccalaureate Sermon by Rev. T. H. Lewis, D. D., of Westminster, Md.

June 7th—Monday, 8 P. M.—Address before the Law Class by Hon. W. T. Willey, of Morgantown, W. Va.

June 8th—Tuesday, 8 P. M.—Address before the Columbian Literary Society by Hon. John W. Mason, of Grafton, W. Va.

June 9th—Wednesday, 8 P. M.—Annual contest between the Literary Societies.

June 10th—Thursday, 9 A. M.—Commencement: 2 P. M. Alumni meeting: 4 P. M. Anniversary of West Virginia Historical Society.

August 31st—Tuesday—Examination of Candidates for admission.

September 1st—Wednesday—Fall term begins.

November 24th—Wednesday—Winter term begins.

1887.

March 9th—Wednesday—Spring term begins.

June 9th—Commencement.

Board of Regents.

No. Dist.	Name of Regents.	P. O. Address.
1	J. B. SOMMERVILLE	Wellsburg.
2	CLARENCE L. SMITH,	Fairmont.
3	PEREGRIN HAYS	Glennville.
4	D. D. JOHNSON,	Long Reach.
5	JACOB L. ARMSTRONG,	Jackson C. H.
6	EDWARD A. BENNETT,	Huntington.
7	JOSEPH E. CHILTON,	Hamlin.
8	CAMERON L. THOMPSON,	Hinton.
9	D. C. GALLAHER,	Charleston.
10	THOMAS J. FARNSWORTH,	Buckhannon.
11	JOSEPH MORELAND,	Morgantown.
12	JOHN A. ROBINSON,	Patterson's Creek.
13	E. W. BEDINGER,	Charlestown.

OFFICERS OF THE BOARD,

JOHN A. ROBINSON, President.
JOHN I. HARVEY, Treasurer.
W. P. WILLEY, Secretary.

EXECUTIVE COMMITTEE,

JOSEPH MORELAND, Chairman.
JOHN J. BROWN.
WILLIAM MOREHEAD.
E. SHISLER.

SECRETARY.

W. P. WILLEY.

SUPERINTENDENT OF GROUNDS AND BUILDINGS,

LIEUT. JAMES L. WILSON.

WILLIAM DANSER, Janitor.

Faculty and Teachers.

E. M. TURNER, A. M., President,

Professor of Rhetoric.

D. B. PURINTON, A. M, Vice-President,

Professor of Metaphysics.

ROBERT C. BERKELEY, M. A.,

Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., Librarian,

Professor of Modern Languages and Literature.

I. C. WHITE, A. M.,

Professor of Geology and Natural History.

A. W. LORENTZ, A. M.,

Principal of Preparatory Department.

ST. GEORGE T. BROOKE,

Professor of Common and Statute Law.

B. W. ALLEN, M. D.,

Professor of Anatomy, Physiology and Hygiene.

W. P. WILLEY, A. M., SECRETARY,

Professor of Equity Jurisprudence and History.

LIEUT. JAS. L. WILSON, 4TH U. S. ARTILLERY,

Professor of Mathematics and Military Science and Tactics.

A. R. WHITEHILL, A. M.,

Professor of Agriculture, Chemistry and Physics.

REV. P. B. REYNOLDS, A. M.,

Professor of English.

JAMES S. STEWART, M. S.,

Assistant in Preparatory Department.

STUDENTS.

ABBREVIATIONS.

Met.—Metaphysics. Ma.—Mathematics. Lat.—Latin. Gr. Greek. A. L.—Ancient Languages. Ger.—German. Fr.—French. M. L.—Modern Languages. E.—English. H.—History. Ag.—Agriculture. Chem.—Chemistry. Ph.—Physics. Anat.—Anatomy, Physiology and Hygiene. G.—Geology. Bot.—Botany. Z.—Zoology. Students still under the former curriculum are designated by their classes. Soph.—For Sophomore. Jr.—Junior. Sen.—Senior. Class.—Classical. Sci.—Scientific. Those who also have studies in the Preparatory Department—P.

Armstrong, Robert Allen, French Creek, Upshur county. Ma., Met., Chem., Gr., Bot., Z.

Anderson, Luther Colfax, Walkersville, Lewis county. P., Ph.

Baker, George C., Morgantown. Law.

Baker, William H., Morgantown. Law.

Ballah, Asa Franklin, Gray's Flat, Marion county. P., Ma., E.

Beamer, Erastus Houston, Pickaway, Monroe county. P., E.

Bee, Isaiah Ernest, Princeton, Mercer county. P., E., Ph., Ag.

Berkeley, William Nathaniel, Jr., Morgantown. Met., Ger., E., Z.

Bishop, Charles Young, Kingwood, Preston county. P.

Blackwood, Robert Edward Lee, St. Albans, Kanawha county. P., E., Bot.

Blair, Robert Skyles, Jr., Ritchie C. H. Ma., E., Ger., Lat., Chem., Bot.

Bowers, Charles Edmund, Kingwood, Peston county. P., Bot., E., Ma.

Boyd, Alfred Caldwell, Wheeling. P., Chem., Ma., Bot., Z.

Boyd, George Edmund, Jr., Wheeling. Law.

Boyers, Luther M., Morgantown. Law.

Brown, James Edgar, Halleck, Monongalia county. P., Ma., E., H., Ag.

*Bush, Asa Bee, Tanners, Gilmer county. Chem.

Casselberry, Byron Wright, Morgantown. P.

*Post graduate.

Moore, John H., Meadowville, Barbour county. Ma., E., H., P.

Morgan, William Augustus, Jr., Shepherdstown, Jefferson county. P., Ag., Ph.

Morgan, William Henry, Morgantown. P.

Morris, Russel Love, Teay's, Putnam county. P., E.

Musgrave, Elijah Clinton, West Columbia, Mason county. P., Ma., E., Bot., Z.

Musgrove, Samuel Morgan, Bunner's, Marion county. Law.

Neal, George Ira, Milton, Cabell county. P., E.

Nickell, Frank Hubert, Sink's Grove, Monroe county. P., Bot.

Ogden, Herschel Coombs, Fairmont, Marion county. A. L., Ma., M. L., Met., Z.

Patterson, Julian Sedgwick, Carmichaels, Pa. Anat.

Pell, Milliard, Masontown, Preston county. P., Bot., E., Ma.

Porter, Richard Clark, New Cumberland, Hancock county. P., Ger.

Protzman, Herschel W., Morgantown. P., E.

Ralphsnyder, William, Arnettsville, Monongalia county. H., E., Bot.

Ralphsnyder, George McClellan, Arnettsville, Monongalia county. P., E., H., G., Bot.

Rankin, Charles, Moundsville, Marshall county. P., Bot., E.

Rector, Thomas Gaylord, Briscoe Run, Wood county. E., Ma., Ger., Chem., H., Bot., Ag.

Reed, John Milton, Morgantown. Anat.

Reynolds, Frank Cornelius, Keyser, Mineral county. P., Lat., Ma.

Reynolds, Wayland Fuller, Morgantown. P., Ma., Lat., Ph.

Robinson, George Pomeroy, Baltimore, Md. Ma., E., Fr., Chem., Z.

Robinson, Henry Morgan, Baltimore, Md. P.

Robinson, Henry L., Uniontown, Pa. Law.

Ryland, Henry Halleck, Fairchance, Fayette county, Pa. A. L., Ma., E., Ph.

Rymer, William Andrew, Ritchie C. H. P., Bot., Ag.

Sample, Martin Luther, Randall, Monongalia county. P.

Shepherd, Thomas Rogers, Bayard, Warren county, Va. Bot., G., Ger., Ma., Chem., Ph.

Simons, Okey Johnson, Jackson C. H. P.

Sisler, George Washington, Stewartstown, Monongalia county. P., H.

Smell, W. A., Morgantown. P.

Smith, Thomas Jefferson, Randall, Monongalia county. P.

Smith, William Abraham, Easton, Monongalia county, P.

Snider, Frank, Easton, Monongalia county. A. L., Ma., E., H.

Snider, Millard Fillmore, New Milton, Doddridge county. P., H., E., Law.

*Stewart, James S., Morgantown, Anat.

Stifel, Edward William, Wheeling. P., Chem.

Stoetzer, Herrman G., Wheeling. P., Ma., Ph., H., Bot., E.

Stribling, Taliaferro, Jr., Point Pleasant, Mason county. P., Ma., E., Bot., Ph.

Swan, Leroy, Middlebourne, Tyler county. Ma., Fr., Ph., Ag., H.

Thompson, John Perry, Wolf's Summit, Harrison county. P., H., Bot., Ma., E.

Turner, George Hill, Parkersburg. Ger., E., Ma., Chem., Z.

Vandervort, Hough, Morgantown. P.

Van Gilder, G. E., Monongalia county. H., P.

Waters, Nacy M., Independence, Preston county. Ma., Ger., H.

Weaver, Ulysses Arnold, Walkersville, Lewis county. P., Ph.

Wees, Boyd, Leedsville, Randolph county. P.

White, William James, St. Cloud, Monongalia county. A. L., Ma., E., H., Bot.

Whitehead, William Goheen, Arbuckle, Mason county. P., Anat.

Wilson, Blackwell Chilton, St. Albans, Kanawha county. Law.

Wilson, Thomas Macaulay, Laurel Point, Monongalia county. A. L., E., H., Chem., Anat.

Woods, Frank Davidson, Morgantown. P.

Woodson, Elmore Edson, Beckwith, Fayette county. P., E., Ma., Ph.

Yost, Larnard Hill, Basnett, Marion county. Ger., E., Chem., H., Ph., Bot., Ag.

Yost. Zoath Freeman, Basnett, Marion county. Ma., Ger., Met., G., Chem., Bot., Ph., Anat.

*Post Graduate.

Preparatory Students.

Name.	Residence.	County.
Anderson, L. C.	Walkersville	Lewis county.
Ballah, A. F.	Gray's Flat	Marion county.
Beamer, E. H.	Pickaway	Monroe county.
Bee, I. E.	Princeton	Mercer county.
Bishop, C. Y.	Kingwood	Preston county.
Blackwood, R. E. L.	St. Albans	Kanawha county.
Bowers, C. E.	Kingwood	Preston county.
Boyd, A. C.	Wheeling	Ohio county.
Casselberry, B. W.	Morgantown	Monongalia county.
Chase, J. J.	Jackson C. H.	Jackson county.
Chilton, J. S.	St. Albans	Kanawha county.
Cobun, L. J.	Masontown	Preston county.
Cole, G.	Cassville	Monongalia county.
Corpenning, G. B.	Clarksburg	Harrison county.
Cox, E. W.	Cox's Landing	Cabell county.
Crawford, J. A.	Wheeling	Ohio county.
Cutlip, J. E.	Braxton C. H.	Braxton county.
Davis, J. E.	Maidsville	Monongalia county.
Dawson, J. E.	Uniontown, Pa.	
Deahl, J. N.	Moatsville	Barbour county.
Dolan, T. A.	Parkersburg	Wood county.
Dupuy, A.	Morgantown	Monongalia county.
Echart, T. L.	Easton	" "
Fleming, R. L.	Cassville	" "
Foster, J. M.	Cold Water	Doddridge county.
Foster, J. D.	Morgantown	Monongalia county.
Ford, J. B.	Independence	Preston county.

Galford, J. E.	Walkersville	Lewis county.
Guthrie, D. S.	Kingwood	Preston county.
Hackney, J. M.	Morgantown	Monongalia county.
Hall, S. T.	Laurel Point	" "
Harvey, Cameron	Morgantown	" "
Hassler, A.	Washington, D. C.	
Hayes, E. E.	Morgantown	Monongalia county.
Hayes, U. S. G.	Belington	Barbour county.
Henshaw, J. S.	Martinsburg	Berkeley county.
Hitchens, W. S.	Morgantown	Monongalia county.
Hite, B. H.	Morgantown	" "
Houston, H.	Easton	" "
Irwin, W. W.	Morgantown	" "
Jaco, L. M.	Easton	" "
Jones, V. N.	Palatine	Marion county.
Knee, E. J.	Piedmont	Mineral county.
Kramer, J. T.	White Day	Monongalia county.
Lawhead, L.	Morgantown	" "
Leavitt, P.	New England	Wood county.
Lindemuth, L. A.	Wheeling	Ohio county.
Madera, Grant	Morgantown	Monongalia county.
Mann, E.	Fort Spring	Greenbrier county.
Martin, T. L.	Grafton	Taylor county.
McConaha, W. H.	St. Albans	Kanawha county.
McElhoy, M. L.	Laurel Point	Monongalia county.
McIntire, U. G.	Elk Garden	Mineral county.
Montgomery, F. H.	Coal Valley	Fayette county.
Montgomery, J. L.	Fayetteville	Fayette county.
Morgan, W. A.	Shepherdstown	Jefferson county.
Morgan W. H.	Morgantown	Monongalia county.
Morris, R. L.	Teay's	Putnam county.
Musgrave, E. C.	West Columbia	Mason county.
Neal, G. I.	Milton	Cabell county.
Nickell, F. H.	Sink's Grove	Monroe county.
Pell, M.	Masontown	Preston county.

Porter, R. C.	New Cumberland	Hancock county.
Ralphsnyder, G. M.	Arnettsville.	Monongalia county.
Rankin, C.	Moundsville.	Marshall county.
Reynolds, F. C.	Keyser.	Mineral county.
Reynolds, W. F.	Morgantown.	Monongalia county.
Robinson, H. M.	Baltimore, Md.	
Rymer, W. A.	Ritchie C. H.	Ritchie county.
Sample, M. L.	Randall	Monongalia county.
Simons, O. J.	Jackson C. H.	Jackson county.
Sisler, G. W.	Stewartstown.	Monongalia county.
Smell, W. A.	Morgantown	" "
Smith, T. J.	Randall.	" "
Smith, W. A.	Easton.	" "
Snider, M. F.	New Milton.	Doddridge county.
Stifel, E. W.	Wheeling.	Ohio county.
Stoetzer, H. G.	Wheeling.	Ohio county.
Stribling, T., Jr.	Point Pleasant.	Mason county.
Thompson, J. P.	Wolf's Summit	Harrison county.
Vandervort, H.	Morgantown.	Monongalia county.
Van Gilder, G. E.	Morgantown	" "
Weaver, U. A.	Walkersville	Lewis county.
Wees, B.	Leedsville.	Randolph county.
Whitehead, W. G.	Arbuckle.	Mason county.
Woods, F. D.	Morgantown.	Monongalia county.
Woodson, E. E.	Beckwith.	Fayette county.

NOTE.—Many of the foregoing list have one or more studies in the University Departments.

Number in the Several Schools.

Agriculture	17
Chemistry	20
Physics	20
Anatomy, Physiology and Hygiene	10
Zoology	15
Geology	8
Botany	35
English	61
Metaphysics	13
Mathematics	41
Latin	16
Greek	9
French	8
German	19
History	19
Law and Equity	14
Preparatory Department	34
Some Study in Preparatory Department	90

RECAPITULATION.

BY COUNTIES IN WEST VIRGINIA.

Barbour	3
Berkeley	2
Braxton	1
Cabell	2
Doddridge	2
Fayette	3
Gilmer	1
Greenbrier	1
Hancock	2
Harrison	2
Jackson	2
Jefferson	2
Kanawha	4
Lewis	3
Marion	6
Marshall	1
Mason	4
Mercer	1
Mineral	3
Monongalia	50
Monroe	2
Ohio	6
Preston	9
Putnam	1
Randolph	2
Ritchie	2
Taylor	1

Tyler	1
Upshur	1
Wood	4
Total	124

RECAPITULATION BY STATES.

West Virginia	124
Pennsylvania	6
Maryland	3
Virginia	1
Kansas	1
District of Columbia	1
Total	136

Number of Students Each Year.

The following is an exhibit of the number of students enrolled annually from the beginning:

The year 1867–8 shows a total of 124.
The year 1868–9 shows a total of 154.
The year 1869–70 shows a total of 161.
The year 1870–1 shows a total of 166.
The year 1871–2 shows a total of 159.
The year 1872–3 shows a total of 144.
The year 1873–4 shows a total of 138.
The year 1874–5 shows a total of 125.
The year 1875–6 shows a total of 96.
The year 1876–7 shows a total of 93.
The year 1877–8 shows a total of 118.
The year 1878–9 shows a total of 135.
The year 1879–80 shows a total of 132.
The year 1880–1 shows a total of 162.
The year 1881–2 shows a total of 177.
The year 1882–3 shows a total of 159.
The year 1883–4 shows a total of 96.
The year 1884–5 shows a total of 107.
The present year shows a total of 136.

Vocal Music.

D. B. PURINTON, A. M., Instructor.

The course of Instruction embraces one year, as follows:

Fall Term—Rudiments and Elementary Practice.

Winter Term—Rudiments Continued, Glee and Chorus Singing.

Spring Term—Lectures on Harmony and Composition. Theory of Music and Musical Form, with original exercises in Harmony and Composition.

STUDENTS, 1885-6.

Beamer, E. H.
Blackwood, R. E. L.
Boyd, G. E.
Brown, J. E.
Corpenning, G. B.
Echart, T. L.
Getzendaner, F. C.
Hayes, U. S. G.
Kramer, J. T.
Leavitt, P.
Lindemuth, L. A.
Mann, E.
Montgomery, J. L.
Morris, R. L.
Nickel, F. H.
Protzman, H. W.
Robinson, G. P.
Smell, W. A.
Stoetzer, H. G.
Thompson, J. P.
Whitehead, W. G.

UNIVERSITY GLEE CLUB.

U. S. G. Hayes . . . . . First Tenor.
H. H. Ryland . . . . . First Tenor.
W. G. Whitehead . . . . . First Tenor.
F. C. Getzendaner . . . . . Second Tenor.
L. A. Lindemuth . . . . . Second Tenor.
E. C. Musgrave . . . . . Second Tenor.
G. E. Boyd . . . . . First Bass.
L. M. Boyers . . . . . First Bass.
D. L. Jemison . . . . . Second Bass.
G. P. Robinson . . . . . Second Bass.

Roster of the Military Department.

JAMES L. WILSON,

First Lieutenant 4th U. S. Artillery, Commandant of Cadets.

Roster of Cadet Officers and Non-Commissioned Officers.

Battalion Staff.

Cadet B. C. Wilson . . . . . 1st Lieut. and Adjutant.
Cadet J. D. Cox . . . . . Ordnance Sergeant.

Color Guard.

Cadet T. R. Shepherd. . . . . Color Sergeant.
Cadet J. E. Lazzell . . . . . Corporal.
Cadet J. E. Cutlip. . . . . Corporal.
Cadet U. S. G. Hayes . . . . . Corporal.

Company "A."

Cadet G. E. Boyd, Jr., Captain of Artillery and Commanding Co. "A."
Cadet J. E. Charles . . . . . 1st Lieutenant.
Cadet W. J. White. . . . . 2d Lieutenant.

Non-Commissioned Officers.

Cadet M. D. Helmick . . . . . 1st Sergeant.
Cadet D. L. Jemison. . . . . 2d Sergeant.
Cadet G. H. Turner . . . . . 3d Sergeant.
Cadet Leroy Swan . . . . . Corporal.
Cadet E. C. Musgrave . . . . . Corporal.
Cadet D. L. Jemison . . . . . Corporal.

Company "B."

Cadet R. A. Armstrong . . . . . Captain.
Cadet G. P. Robinson . . . . . 1st Lieutenant.
Cadet E. S. Elliott . . . . . 2d Lieutenant.

Non-Commissioned Officers.

Cadet R. W. Dawson . . . . . 1st Sergeant.
Cadet W. T. Henshaw . . . . . 2d Sergeant.
Cadet H. G. Stoetzer . . . . . 3d Sergeant.
Cadet J. E. Brown . . . . . Corporal.
Cadet T. A. Dolan . . . . . Corporal.
Cadet H. H. Emmert . . . . . Corporal.

Drum Corps.

Cadet F. H. Montgomery . . . . . Tenor Drummer.
Cadet E. W. Stifel . . . . . Tenor Drummer.

General Roster of State Cadets.

DISTRICT I.

Name.	County.	When Enlisted.	Status.
Boyd, George E.	Ohio	September 30, 1884	Present.
Stoetzer, H. G.	Ohio	September 3, 1884	Present.
Lindemuth, L. A.	Ohio *Brooke	September 2, 1885	Present.
Crawford, J. A.	Ohio *Brooke	September 1, 1885	Present.
Boyd, A. C.	Ohio *Hancock	September 1, 1885	Present.

DISTRICT II.

Cox, J. D.	Marion	March 24, 1882	Present.
Jones, V. N.	Marion	September 1, 1885	Present.
Ogden, H. C.	Marion	September 3, 1885	Present.
Henshaw, J. S.	Berkeley *Marshall	September 1, 1885	On leave of absence.
Yost, L. H.	Marion *Marshall	September 15, 1885	Present.
Lawson, E. W.	Taylor *Wetzel	September 12, 1881	Disch'd Sept. 2, 1885.

DISTRICT III.

Corpenning, Geo. B.	Harrison	September 1, 1885	Present.
Rymer, W. A.	Ritchie	September 15, 1885	Present.
Romine, A. L.	Harrison	September 27, 1883	Disch'd Sept. 2d, 1885.
Wolfe, H. N.	Harrison *Doddridge	September 27, 1884	Dropped from the rolls.

(Three vacancies.)

*County to which accredited.

DISTRICT IV.

Name.	County.	When Enlisted.	Status.
Turner, George H.	Wood.	September 3, 1884.	Present.
Dolan, Thomas A.	Wood.	September 4, 1884.	Disch'd March 23, 1886

(Three vacancies.)

DISTRICT V.

Charles, J. E.	Mason.	September 5, 1883.	Present.
Musgrave, E. C.	Mason.	March 19, 1884	Present.
Chase, J. J.	Jackson	September 1, 1885	Disch'd Sept. 1, 1885.
Simons, O. J.	Jackson	September 1, 1885	Disch'd Sept. 1, 1885.
Hassler, Alpha.	Jackson	September 1, 1885	Present.
Stribling, T.	Mason.	September 21, 1885	Present.
English, L. S.	Mason.	September 3, 1884	Dropped from the rolls.

(One vacancy.)

DISTRICT VI.

Brown, J. E.	Marion. *Putnam	November 22, 1884	Present.
Morris, R. L.	Putnam	September 1, 1885	Present.
Mann, Edwin	Cabell	September 14, 1885	Present.
Neal, George	Cabell	March 10, 1886	Present.
Cox, E. M.	Monongalia. *Wayne	December 13, 1884	Disch'd Sept. 2, 1885.
Prickett, Wm. A.	Marion. *Cabell	December 20, 1884	Disch'd Sept. 2, 1885.

(One vacancy.)

DISTRICT VII.

Robinson, Geo. P.	Kanawha *Logan	September 7, 1883	Present.
Chilton, J. S.	Kanawha *Lincoln	September 1, 1885	Present.
McConaha, W. H.	Kanawha *Boone	September 1, 1885	Present.

*County to which accredited.

Name.	County.	When Enlisted.	Status.
McElroy, ...	Marion . . . / *Raleigh . .	September 3, 1885 .	Present.
Bee, I. E.	Mercer . . .	January 22, 1886 . . .	Present.
Lively, F.	Summers . .	September 6, 1883 . .	Disch'd Sept. 2, 1885.
Hodge, A. A.	Monroe . . .	September 27, 1883 . .	Disch'd Sept. 2, 1885.

DISTRICT VIII.

Woodson, E. E. . . .	Fayette . . .	September 1, 1885 . .	Present.
Beamer, E. H.	Monroe . . .	September 1, 1885 . .	Present.
Nickell, F. H.	Monroe . . .	September 1, 1885 . .	Present.
Montgomery, J. L. . .	Fayette . . .	September 3 1885 . .	Present.
Whitehead, W. G. . .	Summers . .	January 6, 1886 . . .	Present.

DISTRICT IX.

Wilson, B. C.	Kanawha . .	September 5, 1883 . .	Present.
Cutlip, J. E.	Braxton . . .	September 3, 1884 . .	Present
Reynolds, W. F. . . .	Kanawha . .	September 1, 1885 . .	Present
Blackwood, R. E. L. .	Kanawha . .	January 6, 1886 . . .	Present

(One vacancy.)

DISTRICT X.

Armstrong, R. A. . .	Upshur . . .	March 8, 1882	Present.
Helmick, M. D. . . .	Lewis . . .	September 22, 1883 . .	Present.
Moore, J. H.	Barbour . .	March 25, 1885 . . .	On leave of absence.
Martin, Thos. L. . . .	Taylor . . .	September 22, 1884 . .	Discharged Jan. 5, 1886.
Wees, Boyd	Randolph . .	March 10, 1886 . . .	Present.

DISTRICT XI.

Lazzell, J. E.	Monongalia. .	September 5, 1883 . .	Present.
Jemison, D. L. . . .	Monongalia. .	September 5, 1883 . .	Present.
White, W. J.	Preston. . .	September 14, 1883 . .	Present.
Elliott, E. S.	Preston. . .	September 10, 1884 . .	Present.
Bishop, Charles Y. . .	Preston. . .	September 1, 1885 . .	Present.

*County to which accredited.

DISTRICT XII.

Name.	County.	When Enlisted.	Status.
Wirgman, C. T.	Hampshire	September 4, 1884	Disch'd Sept. 2, 1885.
Henshaw, W. T.	Berkeley *Hampshire	October 28, 1884	Present.
Melvin, W. J.	Jefferson *Grant	January 14, 1885	Disch'd Sept. 2, 1885.
Hayes, U. S. G.	Barbour *Grant	March 26, 1885.	Present.
Reynolds, Frank	Mineral.	March 10, 1886	Present.
McIntire, W. G.	Mineral.	March 15, 1886	Present.

(One vacancy.)

DISTRICT XIII.

Emmert, H. H.	Berkeley	September 3, 1884	Present.
Dawson, R. W.	Monongalia *Morgan	September 3, 1884.	Present.
Shepherd, T. R.	Jefferson	September 6, 1883	Present.
Hooff, F. B.	Jefferson	October 5 1884	Disch'd Sept. 2, 1885.
Strode, E. L.	Jefferson	September 5, 1883	Disch'd Sept. 2, 1885.
Morgan, Wm. A.	Jefferson	September 9, 1885	Present.
Getzendaner, F. C.	Jefferson	Septemder 9, 1885	Present.

VOLUNTEER CADETS.

Name and Residence.	When Enlisted.	Status.
1. Smith, F. H., Uniontown, Pa.	Sept. 3. 1884	Disch'd Sept. 2, 1885.
2. Swan, Leroy, Middlebourne, W. Va.	Sept. 20, 1882	Present.
3. Robinson, H. M., Baltimore, Md.	Sept. 1, 1885	Present.
4. Porter, R. C., New Cumberl'd, W. Va.	Sept. 3, 1885	Present.
5. Montgomery, F H., Coal Valley, W. Va.	Sept. 3, 1885	Present.
6. Ryland, H. H., Monongalia county	Sept. 10, 1885	Present.
7. Stifel, E. W., Wheeling, W. Va.	Oct. 12, 1885	Present.
8. Rankin, Charles, Moundsville, W. Va.	Mar. 16, 1886	Present.

*County to which accredited.

Distinguished Cadets, 1884-5.

Armstrong, R.	Military.
Armstrong, R. A.	"
Boyd, George E.	"
Brown, J. E.	"
Dawson, R. W.	"
Fleming, H.	"
Elliott, E. S.	"
Robinson, George P.	"
Stoetzer, H. G.	"
Sweeney, J. D.	"
Tapp, R. W	"

Note.—Students attaining a standing of nine in a scale of ten, for the entire year, are entered as Distinguished.

Degrees, Diplomas and Certificates.

Conferred at Commencement, June, 1885.

MASTERS OF ARTS.

T. R. Boyd.
Z. K. Brown.
D. H. Courtney.
Theophilus E. Hodges.
James H. Stewart.
E. D. Jeffries.
G. C. Lewis.

BACHELORS OF ARTS.

N. D. Adams.
A. B. Bush.
R. W. Tapp.
H. Fleming.

MASTERS OF SCIENCES.

A. L. Cox.
J. H. Lawhead.

BACHELORS OF SCIENCES.

R. Armstrong.
B. W. Meadows.
J. D. Sweeney.

BACHELORS OF LAW.

B. L. Keenan.
F. Lively.
R. E. McKinley.
J. H. Stewart.
W. S. Stewart.
H. J. Sturgis.

This degree was also conferred upon the following named gentlemen, who passed the examinations in law before the University had authority to confer the degree:

E. W. Bedinger. Frank T. Haymond. Samuel C. Kelley.
Arthur L. Cox. Waitman T. Houston. Wm. R. Thompson
L. C. Tabb.

DIPLOMAS TO GRADUATES IN SCHOOLS.

ANCIENT LANGUAGES.

W. N. Berkeley, Jr. T. R. Shepherd.

MODERN LANGUAGES.

French.

J. E. Charles. T. G. Rector. Z. F. Yost.

German.

R. Armstrong. Leroy Swann. B. C. Wilson.
B. W. Meadows. J. D. Sweeney.

ENGLISH.

R. A. Amstrong. H. C. Ogden. Leroy Swann.
J. D. Cox. A. L. Romine. Z. F. Yost.
T. R. Shepherd.

METAPHYSICS.

N. D. Adams. A. B. Bush. J. D. Sweeney.
R. Armstrong. H. Fleming. R. W. Tapp.

MATHEMATICS.

R. Armstrong. E. W. Lawson. W. S. Stewart.
R. W. Dawson. B. W. Meadows, R. W. Tapp.
H. Fleming. A. L. Romine. N. M. Waters

HISTORY.

R. A. Armstrong. M. D. Melmick. H. G. Stoetzer.
George E. Boyd, Jr. F. Lively. J. D. Sweeney.
E. W. Cox. G. P. Robinson. C. T. Wirgman.
R. W. Dawson. A. L. Romine.

PHYSICS.

W. N. Berkeley, Jr. B. W. Meadows.
A. B. Bush. H. C. Ogden.

CHEMISTRY.

J. E. Charles. A. A. Hodge. G. Latham.
R. W. Dawson. Walter Hough. B. W. Meadows.
N. M. Waters.

GEOLOGY AND NATURAL HISTORY.

W. Hough. B. W. Meadows.

NATURAL HISTORY.

N. D. Adams.

CERTIFICATES OF PROFICIENCY.

ANATOMY.

F. T Haught.

CERTIFCATES OF PROMOTION.

JUNIOR GREEK.

R. A. Armstrong. E. S. Elliott. H. C. Ogden.
H. Brand. M. D. Helmick. W. J. White.

INTERMEDIATE GREEK.

R. W. Dawson. N. M. Waters.

JUNIOR LATIN.

H. Brand. M. D. Helmick. H. C. Ogden.
E. S. Elliott. G. G. Heiner. T. M. Wilson.
H. H. Emmert.

INTERMEDIATE LATIN.

R. A. Armstrong. N. M. Waters.

JUNIOR FRENCH.

R. W. Dawson.
H. H. Emmert.
G. G. Heiner.
W. T. Henshaw.
H. G. Stoetzer.
N. M. Waters.

JUNIOR GERMAN.

N. D. Adams.
R. A. Armstrong.
W. N. Berkeley, Jr.
A. B. Bush.
E. S. Elliott,
H. Fleming.
C. P. Goff.
E. W. Lawson.
H. C. Ogden.
T. G. Rector.
R. W. Tapp.
G. H. Turner.

METAPHYSICS.

R. A. Armstrong.
A. B. Bush.
R. W. Dawson.
E. S. Elliott.
E. W. Lawson.
T. G. Rector.
T. R. Shepherd.
Leroy Swann.
N. M. Waters.
Z. F. Yost.

JUNIOR MATHEMATICS.

N. D. Adams.
R. A. Armstrong,
H. Brand.
H. H. Emmert.
C. Hartmeyer.
G. G. Heiner.
A. A. Hodge.
D. L. Jemison.
H. H. Ryland.
G. H. Turner.
T. M. Wilson.
W. J. White.

INTERMEDIATE MATHEMATICS.

N. D. Adams.
J. E. Charles.
J. D. Cox.
E. S. Elliott.
H. C. Ogden.
T. G. Rector.
T. R. Shepherd.
Leroy Swann.
Z. F. Yost.

NATURAL HISTORY.

R. W. Dawson.
T. G. Rector.
N. M. Waters.
Leroy Swann.
Z. F. Yost.

JUNIOR ENGLISH.

W. N. Berkeley, Jr.
G. E. Boyd, Jr.
H. Brand.
E. W. Cox.
H. H. Emmert.
C. Hartmeyer.
G. G. Heiner.
M. D. Helmick.
A. Dupuy.
H. H. Ryland.
H. G. Stoetzer.
W. J. White.
T. M. Wilson.

HISTORY.

W. T. Henshaw.
B. H. Hite.
E. W. Lawson.
E. C. Musgrave.
G. E. Vangilder.

Scope and Work of the University.

The University includes in its organization a Preparatory Department, an Academic Department, a Law Department, a preparatory course in Medicine, and a Military Department.

REQUISITES FOR ADMISSION.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Applicants for admission to the Preparatory Department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic.

IV. Those wishing to enter the Academic Department must stand a satisfactory examination on the foregoing list of studies, and also on such studies of the Preparatory Department as are related to the academic schools they desire to enter.

V. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VI. All students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally."

Preparatory Department.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. This department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity of this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of collegiate study proper, or shutting out from the advantages of the Institution many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or, if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University. Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the principal of the school, to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men, living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

THE COURSE OF STUDY

In the Preparatory Department aims to prepare young men for admission to the higher classes in the University, and to fit those who do not desire to take the full course for the business of life.

Candidates for entrance should be at least fifteen years old, and should have *thoroughly* accomplished the ordinary course of study in the common schools of the State.

JUNIOR YEAR

FIRST TERM

Geography—Guyot's Common School; Map Drawing.
Arithmetic—Stoddard's Complete.
English Grammar—(Swinton) Etymology.
Latin (commenced).

SECOND TERM.

Book-keeping (one-half term).
Geography (one-half term).
Arithmetic (one-half term).
English Grammar—Syntax and English Composition.
Latin—Grammar and Reader. Chase and Stuart.
Algebra—Robinson's Elementary (commenced).

THIRD TERM.

Algebra—Robinson's Elementary (completed).
English Grammar—Analysis, Prosody and English Composition.
Latin—Grammar and Readers.
Book-keeping—Bryant and Stratton (completed).

SENIOR YEAR.

FIRST TERM

Algebra—Robinson's University.
Cæsar (two books)—Latin Grammar.
Greek—Grammar and Reader. (Goodwin).
Geometry—Robinson's.
English Composition—(Hart.) Essays.

SECOND TERM.

Algebra (continued).

Cicero's Orations (three orations)—Chase and Stuart's Latin Grammar.

Greek—Grammar and Reader.

Geometry (continued).

English Composition and Essays (continued).

THIRD TERM.

Algebra (completed).

Geometry (completed).

Virgil—Three books of Æneid; Latin Grammar.

Xenophon's Anabasis (two books). Greek Grammar.

English Composition and Essays (continued).

THE ACADEMIC OR COLLEGIATE DEPARTMENT

The course of study in this department is distributed into nine independent schools. The object of this distribution is to allow greater freedom in the selection of studies and to elevate the standard of instruction and attainment.

But while the course is elective, the Faculty will advise students as to the choice and arrangement of their studies, and always encourage a complete and regular course.

Each student in the Academic Schools is required to attend at least sixteen recitations per week, and to adhere throughout the session to the studies selected on his matriculation, unless the Faculty, for cause shown, allow him to attend a less number or to make an exchange.

Students will be classed in the several schools according to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

The advantages to the student, of the elective system, are that he may pursue the studies of any school for which he is prepared, without regard to his deficiency in other studies; that he receives his diplomas in the several schools in the order in which he completes them; that if he is able or desires to take but a partial course, he may adapt that course to his tastes or his necessities in life; and that he is put upon a footing of social equality with his fellows, and thrown upon his individual efforts, as will soon happen in actual life, for success and distinction in academic study.

The Academic Schools are as follows:

I. Ancient Languages.
II. Modern Languages.
III. English.
IV. Geology and Natural History.
V. Mathematics.
VI. Agriculture, Physics and General and Applied Chemistry.
VII. Metaphysics.
VIII. History.
IX. Rhetoric.

The details of the course of study in the several schools, with the length of time required to complete the same, are stated in the Announcements of the Professors on pages 39–46.

EXAMINATIONS.

Examinations are held at such times as each professor may deem necessary, in his school, and at the close of each term.

No student will be excused for non-attendance at examinations, except upon presentation of a reason which may be considered valid by the Faculty.

Diplomas and Certificates.

I. A Certifcate of Promotion will be given to each student who attains a standing of 7 on a scale of 10 for one year's continuous study in Junior or Intermediate classes.

II. A Certificate of Proficiency will be awarded for satisfactory attainments in the entire studies of any school, or completed subject therein.

III. A Diploma will be conferred on each student who attains a standing of 7 on a scale of 10 during the entire course in any of the following subjects: Latin, Greek, French, German, Chemistry, Physics, Geology, Natural History, Analytical Chemistry.

IV. A Diploma will be granted to each student who completes the entire course in any academic school with a standing of 7 on a scale of 10 in the Senior class or classes thereof.

V. No student will be awarded a diploma or degree, who is deficient in English elementary studies.

In ascertaining a student's standing in his classes, examination marks count one-half and recitation marks one-half, and the time allowed for each examination shall not be less than two hours, and may be as much more as the Professor in charge shall deem sufficient.

DEGREES.

The Academic Degrees are the following:

Bachelor of Sciences, B. S.

Master of Sciences, M. S.

Bachelor of Arts, A. B.

Master of Arts, A. M.

Bachelor of Laws, B. L.

REQUIREMENTS FOR DEGREES.

The Degree of Bachelor of Sciences requires: *Certificate of Promotion* in Preparatory Latin; *Diplomas* in the schools of Metaphysics; Rhetoric; Modern Languages; English; Geology and Natural History; Agriculture, Chemistry and Physics; Mathematics; *Certificate of Proficiency* in Physiology and Hygiene.

Latin or Greek in the academic department may take the place of one of the Modern Languages; History or Constitutional and International Law the place of senior English.

The Degree of Master of Sciences requires: *Certificate of Promotion* in Preparatory Latin; *Diplomas* in the schools of Metaphysics; Rhetoric; History; Modern Languages; English; Geology and Natural History; Agriculture, General and Analytical Chemistry, and Physics; Mathematics; and *Certificate of Proficiency* in Anatomy, Physiology and Hygiene.

The Degree of Bachelor of Arts requires: *Diplomas* in the schools of Metaphysics; Rhetoric; Ancient Languages; English; History; and *Diplomas* in Geology or Natural History; Chemistry or Physics; *Certificate of Promotion* in Junior Mathematics; *Certificate of Proficiency* in Physiology and Hygiene.

Chemistry or Physics may take the place of History.

Certificate of Promotion in a Modern Language may take the place of senior Latin or senior Greek.

A *Diploma* in French or German may take the place of Senior Latin and Senior Greek.

The Degree of Master of Arts requires: *Diplomas* from all the academic schools, also *Certificates of Proficiency* in Constitutional and International Law, and Physiology and Hygiene. A satisfactory general examination on all subjects studied will be required of students for this Degree.

Candidates for any of the foregoing degrees must submit to the Faculty a suitable essay or oration to be delivered on Commencement day, if required.

ANNOUNCEMENTS

OF THE

INDIVIDUAL PROFESSORS

IN THE ACADEMIC DEPARTMENT.

SCHOOL OF RHETORIC.

PRESIDENT TURNER.

The course of study in this school requires two years, the *Junior* and *Senior*.

All students desiring to enter this school must have completed the preparatory course in English composition, or stand a satisfactory examination thereon.

In the *Junior* year, instruction will be given by text book and lectures upon the principles of Rhetoric, and practical work will be required, both class-room exercises and original essays.

In the *Senior* year, lectures on Æsthetics and Art will be given, and essays of a more elaborate character will be required, with special attention to style.

Practical work in elocution will also be required throughout the course.

All non-professional students are required to enter this school, if prepared for it, upon matriculation.

Each class will recite once a week.

SCHOOL OF ANCIENT LANGUAGES.

PROF. BERKELEY.

The subjects taught in this school will be:

I. The Latin Language and Literature, in which there will be three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used:

1. *Junior Class*—Virgil's Bucolics and Georgics; Horace's Odes and Epodes; Cicero and de Senectute de Amicitia, and Gildersleeve's or Allen's Latin Grammar and Exercise Book.

2. *Intermediate Class*—Horace's Satires and Epistles, Livy, Tacitus, Latin Prose Composition and Grammar, and Bender's Roman Literature.

3. *Senior Class*—Cicero de officiis, and Exercises in Latin Composition. In this class a private course of parallel reading will be prescribed.

Lexicons Recommended for Each Class—White's, Andrews', Freund's or Leverett's.

II. The Greek Language and Literature, in which there will be also three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used:

1 *Junior Class*—Herodotus, Homer's Illiad and Odyssey, Greek Prose Composition, and Goodwin's Grammar.

2. *Intermediate Class*—Xenophon's Memorabilia, Plato's Apology and Crito, Euripides, Greek Prose Composition, Goodwin's Grammar, and Jebb's Greek Literature.

3. *Senior Class*—Demosthenes, Sophocles, and Exercises in Greek Composition. A private course of parallel reading will also be prescribed for this class.

Lexicon for Each Class—Liddell and Scott's. The abridged edition for the Junior Class. The unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin and Greek according to the so-called continental method.

The Junior and Intermediate classes recite three times a week, and the Senior twice a week.

SCHOOL OF MODERN LANGUAGES.

PROF. HARVEY.

In this School are taught French and German. In each language there are two classes, Junior and Senior. The Junior classes are thoroughly drilled in the Etymological forms, and are practiced in the simpler forms of Syntax. The aim in the Senior classes is to give facility and accuracy in translation. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the Senior classes. Junior classes meet five times a week. Senior classes meet two or three times a week.

Fair knowledge of English and Latin is required for admission to the lower classes.

Text Books:

Junior French—Languellier and Mosanto's Course; Smith's Reader; Colomba, Picciola, or selections from modern authors.

Senior French—Voltaire's Charles XII, Corneille's Cid, Racine's Athalie, Moliere's Misanthrope, Hugo's Ruy Blas, Brachet's Grammar and Saintbury's Literature.

Junior German—Woodbury's Complete Course, Otto's Reader, Schiller's Jungfrau or Wilhelm Tell, or selections from modern authors.

Senior German—Goethe's Iphigenia, Fouque's Undine, Goethe's Hermann and Dorothea, Lessin's Minna von Barnheim, Whitney's Grammar and Conant's Literature.

Reference Books:

French—Spiers and Surenne's, Gase's or Masson's Dictionary; Brachet's Historical, or Wall's Student's Grammar, Van Laun's or Saintbury's Literature.

German—Adler's, Whitney's or Longman's Dictionary, Becker's or Brandt's Grammar, Hosmer's or Harrison and Gostwick's Literature.

SCHOOL OF GEOLOGY AND NATURAL HISTORY.

PROF. WHITE.

This school includes Botany, Zoology, and Geology, and requires two years for the completion of the course.

FIRST YEAR.

During the first year Botany and Zoology will be studied, and instruction in each will be given thrice every week of the Winter and Spring Terms. In addition to a full theoretical knowledge of these subjects, a stated amount of practical work in analyzing and classifying plants, and in dissecting and skeletonizing animals will be required during the Spring Term.

Text Books:

Botany—Gray; Sach's and Bessey's for reference.

Zoology—Orton, and Romane's; for reference, the works of Darwin, Wallace, Mivart and others.

SECOND YEAR.

Geology will form the subject of study during this year, and instruction in it will be given three times a week from the beginning of the Winter Term until the commencement (about the 7th of May) of the Senior vacation. During this vacation a three weeks' excursion will be made through West Virginia and adjoining States, for the purpose of acquiring a knowledge of Practical Geology, the tracing and identification of minerals, the construction of sections, etc. This excursion (the necessary expenses of which shall never exceed fifty dollars) is open to all who pursue the study of Geology, but is required only of those who expect to graduate in the Scientific Department of the University, or to obtain the Diploma of this school.

Text Book:

Leconte's Elements of Geology. For reference, Dana's Manual Lyell's Principles, and Geike's Text Book.

SCHOOL OF METAPHYSICS.

PROF. PURINTON.

The course of study embraces Psychology, Logic, Ethics, Natural Theology, and Evidences of Christianity, requiring two years for its completion.

Instruction is given by means of text book recitations, lectures and parallel readings.

Wherever conflicting theories are encountered, the various arguments and their necessary tendencies are presented to the student, and he is encouraged to investigate and judge for himself.

Text Books and Books of Reference:

Junior Year—Psychology and Logic.

Porter's Intellectual Science, Baine's Mental Science, Bascom's Psychology, McCosh's Intuitions, Hamilton's Lectures, Upham's Mental Philosophy, Edwards on the Will, Jevons-Hill's Logic, Mill's, Hamilton's, Coppee's, Atwater's and De Morgan's Logic.

Senior Year—Ethics, Natural Theology and Evidences of Christianity.

Wayland's Moral Science, with Ethical works of Baine, Hopkins, Hickok, Dymond and Winslow, Bascom's Natural Theology, Alexander's Evidences of Christianity, with Paley, Butler and Paul Janet.

SCHOOL OF HISTORY.

PROF. WILLEY.

History is the study of a lifetime. It can not be completed in a university course, nor can it be excluded. Every student aspiring to a liberal education will need to know History, whatever be his vocation in life. But the most that can be attempted in a college course is to lay a good foundation.

The course of instruction is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist

him to travel easily from cause to effect, and thus to discover not only the facts, but the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study runs through four terms, giving one term to the divisions of Ancient, Mediæval and Modern History, respectively, and one full term to United States History. The text books are Tytler's Universal History and Ridpath's United States History; with *reference* to Myers' Outlines of Ancient History, Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays (first and third series), Arnold's Lectures on Modern History, Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

The course begins regularly with the Fall Term, and it will be more profitable for students, intending to take a full course, to begin at that time.

SCHOOL OF MATHEMATICS.

LIEUT. J. L. WILSON, U. S. A.

The school of Mathematics includes studies in Pure and Applied Mathematics, as follows: Trigonometry (Plane and Spherical), Mensuration, Surveying, Navigation, Analytical Geometry, Differential and Integral Calculus, Analytical Mechanics and Astronomy.

The course of instruction consists of three years:

Junior Year—Trigonometry, Mensuration, Surveying, Navigation and Analytical Geometry (begun).

Intermediate Year—Analytical Geometry completed. Differential and Integral Calculus.

Senior Year—Analytical Mechanics, Astronomy.

Instruction is given by means of lectures, class exercises, and original work by the student. Original problems and practical exercises are required in Trigonometry, Mensuration, Surveying, Topography and Astronomy.

Such useful instruments as the Compass, Transit, Sextant and Tele-

scope are available, and ample opportunity is given for becoming acquainted with their proper manipulation and practical use.

Students are required to pass an examination in University Algebra and in Geometry, in order to enter the Junior year in this school.

SCHOOL OF AGRICULTURE, PHYSICS AND CHEMISTRY.

PROF. WHITEHILL.

Instruction in the several departments of this school is by text books and lectures. Examinations are in writing, and are held at the end of each term.

In *Agriculture*, the attention of the class is directed to the following subjects: The organic and inorganic food of plants, their germination, development and accompanying physical changes; the chemistry and physics of soils, their origin, formation, classification, exhaustion and relation to vegetable nutrition; drainage, irrigation, subsoiling, manures, grain and forage crops, the care and management of stock, etc. The class meets twice a week during the Fall and Winter Terms.

In *Physics*, as a necessary preparation for after study, attention is called to a few of the leading principles of Mechanics, and these are illustrated by experiments so far as the limited supply of mechanical apparatus will permit. Afterwards the subjects of Sound, Heat, Light, Electricity and Magnetism are studied in turn, and the modern doctrines of Molecular Physics are explained. The course in this branch extends throughout the year, and the class recites three times a week.

In *Chemistry*, the subjects presented are the distinctive features of Chemistry, the laws of chemical combination, the origin, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, incidental allusion is made to the application of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account. Students in this branch have access to a well equipped laboratory, and the recitations and lectures are fully illustrated by tests and experiments.

The class recites four times a week.

SCHOOL OF ENGLISH.

PROF. REYNOLDS.

The course in this school includes the subjects named below, and is arranged for two years, as follows:

JUNIOR CLASS.

Exercises in Phonetic, Verbal, Syntactical and Logical Analysis of the English Language; Introduction to English Literature; First Principles of Political Economy.

SENIOR CLASS.

Section I. Elements of Anglo-Saxon; English Philology, or the Constituents and Derivation of the English Language; History and Development of the English Language.

Section II. Principles of Literary Criticism; study of selections from representative authors in the different departments of English Literature; discussion of leading practical questions in Political Economy and Social Science.

Instruction is given by text books, lectures, exercises, and references to the best authorities.

Students entering the Junior Class must have a certificate of promotion in the English branches taught in the Preparatory Department of the University, or must stand a satisfactory examination in these branches.

Students entering the Senior Class must have a certificate of promotion in the Junior Class in this school, and also in the Junior Class in the School of Rhetoric, or must stand a satisfactory examination in the subjects studied in these classes.

Students who prefer to do so, may take each section of the Senior Course separately, and finish the course in two years instead of one.

A fair knowledge of the elements of the languages taught in the University, especially of Latin and Greek, is highly useful, if not indispensable, to the successful study of the subjects included in Section I. of the Senior Class.

LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of the Law in any part of the United States.

It aims to make not merely *theoretical*, but *practical* lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Laws is conferred upon graduates in this department.

The full course covers the branches of Common and Statute Law, Constitutional and International Law, Criminal Law, Maritime Law, Mercantile Law, Equity Jurisprudence, Evidence, Pleading and Practice.

COMMON AND STATUTE LAW, &c.

PROF. ST. GEORGE T. BROOKE.

The text books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property; and for *reference* the Code of West Virginia, and subsequent Acts of the West Virginia Legislature

These text books will be supplemented by lectures each week, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text books used in Constitutional Law will be the "Fœderalist." This, however, will be supplemented by lectures upon our Constitutional

History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions will also be the subject of lectures.

The text book used in International Law will be Woolsey's Introduction to the Study of International Law.

EQUITY JURISPRUDENCE, MERCANTILE LAW, &c.

PROF. W. P. WILLEY

In the branches of Equity Jurisprudence and Mercantile Law, the text books are Adams' Equity and Smith's Mercantile Law, with *reference* to Parsons and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisdiction.

Some special heads of Equity Jurisprudence;

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the law relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent: the law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, &c.; Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

TERMS AND TOPICS.

Three terms constitute the school year, and the entire course of instruction is covered by the lectures within the year, thus enabling the student to complete the course and become a candidate for graduation

at the end of that period. A majority of the students do so; but it is optional with the student to give one year or two to the course. This must be determined by the degree of culture and the qualifications of the student when commencing the course. Many students prefer to take two or three branches of study in the academic departments in connection with their law studies and divide the law course into two years, which is always advisable if the student is deficient in general culture.

As one term is not much dependent upon another as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter at the beginning of the Fall Term if possible.

The work of the year is divided between the three terms as follows:

FALL TERM.

International Law. Rights of Persons and Things—Blackstone. Common Law Pleading.	PROF. BROOKE.
Equity Pleading. Contracts. Negotiable Instruments.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. Evidence. Blackstone, 1st and 2d Books (continued). Blackstone, 3d and 4th Books (begun).	PROF. BROOKE.
Agency. Partnership. Suretyship and Guaranty. Domestic Relations. Equity—Accident, Mistake, Frauds, &c.	PROF. WILLEY.

SPRING TERM.

Constitutional Law (continued). Crimiminal Law, &c.—Blackstone, 3d and 4th Books (continued. Real Property.	PROF. BROOKE.
Bailments, Corporations. Insurance. Equity—Trusts, Wills, &c.	PROF. WILLEY.

In addition to the regular lectures in course, members of the local Bar occasionally favor the school with lectures on topics of special interest.

METHODS OF INSTRUCTION.

The methods of instruction consist in Lectures and Examinations from approved text books read in course; the drawing of the various legal papers requisite in the ordinary practice of the law; and Moot Courts.

Each day before the lecture, there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the text book as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation, a review examination on the entire course. They will all be in writing.

MOOT COURTS.

However familiar the student may be with the text books and with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The moot court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these

they are taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleadings, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the arguments, charge, verdict, motion in arrest of judgment, writ of error, &c. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the bar as gentlemen as well as lawyers.

REQUIREMENTS FOR ADMISSION.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures.

If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and have made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

The degree of Bachelor of Law will only be conferred upon those who are able to pass a rigid examination upon the entire course. The value of a diploma from this department will never be impaired by conferring it where it is not merited and has not been fairly won.

EXPENSES.

The matriculation fee in the Law Department is $15.00 per year.

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

A summary of the expenses for boarding, &c., as given on a succeeding page of this Catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering any of the departments.

The text books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

ADVANTAGES OF A UNIVERSITY LAW COURSE.

The increasing favor in which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law Schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential to the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the Profession of Law, the advantages of a University course can scarcely be overestimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than to master the course; the active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining; and it induces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected miscellaneous library, and the valuable drill of the Literary Societies.

Any information relative to this department will be cheerfully given in reply to inquiries. Correspondence with those desiring to enter is cordially invited.

Bachelors of Law.

Students who have received the Degree of Bachelor of Laws:

1883—Frank Cox . . . . . Morgantown.
1883—S. A. Hays . . . . . Gilmer county.
1883—Melville Peck . . . . . Barbour county.
1883—William Rich . . . . . Monongalia county.
1883—John W. Wiltshire . . . . . Jefferson county.
1884—William T. Bland . . . . . Weston.
1884—Meigs Bland . . . . . Weston.
1884—J. F. Corke . . . . . Harrison county.
1884—I. G. Lazzell . . . . . Monongalia county.
1884—B. S. Morgan . . . . . Monongalia county.
1885—William R. Thompson . . . . . Hinton.
1885—Frank T. Haymond . . . . . Morgantown.
1885—Waitman T. Houston . . . . . Morgantown.
1885—E. W. Bedinger . . . . . Charlestown.
1885—Samuel C. Kelley . . . . . Morgantown.
1885—Arthur L. Cox . . . . . Marion ccunty.
1885—L. C. Tabb . . . . . Jefferson county.
1885—H. J. Sturgis . . . . . Smithfield, Pa.
1885—F. Lively . . . . . Summers county.
1885—James H. Stewart . . . . . Putnam county.
1885—W. S. Stuart . . . . . Doddridge county.
1885—B. L. Keenan . . . . . Monongalia county.
1885—R. E. McKinley . . . . . Latrobe, Pa.

Class of 1886.

The following students constitute the Clas of 1886, and will be examined for the degree when they shall have completed the course:

George C. Baker	Morgantown.
W. H. Baker	Morgantown.
George E. Boyd, Jr	Wheeling.
L. M. Boyers	Monongalia county.
R. W. Dawson	Uniontown, Pa.
C. B. Dille	Morgantown.
A. Dupuy	Morgantown.
R. E. Fast	Morgantown.
J. M. Foster	Doddridge county.
*R. E. McKinley	Latrobe, Pa.
S. M. Musgrove	Marion county.
H. L. Robinson	Uniontown, Pa.
M. F. Snider	Doddridge county.
B. C. Wilson	Kanawha county.

*Post Graduate; attending lectures.

The Medical Department.

The Medical Department of the University does not yet possess all the equipments and advantages of some of the older Medical Schools of the country, but is presided over by a practical Physician of eminent ability and large experience; and it is believed that the instruction in Anatomy, Physiology and Hygiene. together with ample practice in the dissecting room, and with the Schools of Chemistry and Botany, unsurpassed opportunities are offered for the preliminary instruction of medical students, as well as for the education of unprofessional students in essential branches of this department. Nothing is likely to prove so calamitous in the future career of a student, in any vocation of life he may enter, as ignorance of the laws of health, and however high and promising his mental discipline and attainments may be, if he is ignorant of the constitution and laws of his physical organism, observation proves that his success and usefulness will not only be impaired, but the chances are that he will be cut down in the prime of life by the hand of disease. It is these considerations which render this department of the University a most essential adjunct in the education of every student, whether he is seeking to prepare himself for the medical profession or not.

ANNOUNCEMENT OF THE PROFESSOR IN THE SCHOOL OF ANATOMY, PHYSIOLOGY AND HYGIENE.

PROF. ALLEN.

This department has been laboring under certain difficulties since its establishment, which are now being rapidly overcome. The foundation has been laid, and in a few years a museum will be formed of which the State may be proud. During this year this class has been retarded, as were others, to a slight extent.

The aim is to teach Anatomy thoroughly, practically, as well as can

be done anywhere. Subjects are provided for dissection for the students.

Physiology and Hygiene are taught, as is Anatomy whem practicable, by specimens, the microscope, drawings, lectures, models, etc. The examinations are conducted in writing at the close of the session. Daily examinations, which are oral, are held throughout the term. Text books are Gray's Anatomy, Wilson's Anatomy—Carpenter, Flint, or Dalton's Physiology—and for the present, McSherry, Wilson, &c., in Hygiene.

Members of the class who give evidence at the final examination of successful study will receive CERTIFICATES OF FROFICIENCY in the branches taught.

MILITARY DEPARTMENT.

LIEUT. JAS. L. WILSON, FOURTH U. S. ARTILLERY.

Under the law of the State, five cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books aud stationery free, but not more than three can be appointed from any one county, and books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them evidence of good moral character.

The following table will show the counties composing the several districts; the names of the Regents for each district are prefixed to this Catalogue:

District I. Hancock, Brooke, Ohio.
District II. Marshall, Wetzel, Marion.
District III. Ritchie, Doddridge, Harrison, Gilmer, Calhoun.
District IV. Tyler, Pleasants, Wood, Wirt.
District V. Mason, Jackson, Roane.
District VI. Putnam, Cabell, Wayne.
District VII. Lincoln, Boone, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII. Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX. Kanawha, Clay, Nicholas, Braxton, Webster.
District X. Lewis, Randolph, Upshur, Barbour, Taylor, Tucker.
District XI. Preston, Monongalia.
District XII. Hampshire, Hardy, Grant, Mineral, Pendleton.
District XIII. Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause. Drill occupies one hour on each of four days in the week. A neat uniform of cadet gray is worn, including a fatigue suit, which may be worn constantly, and is as economical as ordinary citizens' dress. Cadets may keep this in view in bringing clothes with them. Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term. The University has an ample equipment for both infantry and artillery, and is supplied with ammunition by the State.

The annual course in drill for the corps is as follows :

FIRST TERM -- *Infantry.*—Schools of the Soldier Company and Battalion, including Bayonet Exercise, Skirmish Drill and Target Practice.

SECOND TERM—*Artillery.*-- Manual of the Piece, Manual of the Saber, and Saber exercise.

THIRD TERM—*Infantry and Artillery.*—Company, Battalion and Skirmish Drills, School of the Battery Dismounted. Guard Duty. Target Practice.

Dress Parades, Reviews, Inspections and Guard Mountings are held at least once a week, except during the Winter term.

Lectures on military subjects. including Customs of Service, Organization of Armies, Strategy and Grand Tactics, Military Campaigns, Military Engineering, Heavy Ordnance, Explosive Compounds, Torpedoes, &c., delivered during the year to the members of the corps.

GENERAL REMARKS.

LOCATION.

The West Virginia University is located at Morgantown. Its buildings are ample, eligibly situated, and admirably adapted for their purposes. They are immediately outside of the borough, on the right bank of the Monongahela river, and command a wide prospect of exceedingly attractive and picturesque scenery. Morgantown is reached by the Baltimore and Ohio Railroad's branch line from Fairmont, and also by coaches daily from Fairchance, Pa. Steamboats from Pittsburgh arrive every day at Geneva, twelve miles below Morgantown, and, under appropriations from Congress, the slackwater navigation of the river will soon extend to Morgantown.

ORIGIN.

The University is the outgrowth of the "West Virginia Agricultural College," established in 1867, with the proceeds of the State's share of the land granted by Congress in aid of agricultural and industrial education in the States. This fund, increased by subsequent appropriations by the State, now amounts to about $110,000, and constitutes the permanent endowment of the institution. There are annual appropriations for current and contingent expenses. The citizens of Morgantown, with generous appreciation of educational advantages, contributed in grounds, buildings and money about $50,000.

ENTRANCE EXAMINATIONS.

All new students are expected to be present on the day preceding the opening of the Fall term, being for this year August 31st, in order to

be examined on the studies required for admission, and on those required for admission to the particular schools they desire to enter. They should report at the President's room at the University not later than nine o'clock A. M., on August 31st, and be by him directed to the examiners in the various branches.

DIRECTIONS FOR NEW STUDENTS.

Students who have not before attended the University should, on arriving, report themselves to the President, who will assist them in procuring rooms, and give them directions as to payment of contingent fees, matriculation, enrollment and selection of their studies.

TUITION.

Tuition shall be free to all students from this State over fifteen years of age, in the several departments of the University, except in the Schools of Law and Medicine: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, shall have free tuition, and all others shall be charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States shall be charged $12.50 per term for tuition in the University Department, and $5.00 per term in the Preparatory Department.

Tuition in the Law Department	$15 00 per year.
Tuition in the Medical Department	10 00 per year.
Contingent Fee in all Departments	2 00 per term.

Students in Analytical Chemistry will be charged a fee of $20 per year to cover the use of material and wear and tear of apparatus in their hands.

There will be no variations nor deductions from these rates for any cause whatever, except protracted illness.

Ministerial students are admitted free, upon proper testimonials.

ROOMS AND BOARDING.

Students rent rooms in private houses in the town, there being as yet no dormitories on the University grounds. Room rent ranges from 75 cents to $1.25 per week, everything furnished except lights and towels.

Boarding is furnished either by private families at a stated price per week, or more generally by the system of club boarding.

A number of students form a club, and employ some person to cook for them and furnish room and table ware. One of the club acts as caterer and buys the supplies, of which an account is kept and the actual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.70 to $2.00 per week. Board in private families costs $2.00 to $2.50 per week.

Washing costs from $1.00 to $1.50 per month.

EXPENSES.

The expenses of a student vary according to his habits. The *necessary* expenses of a student at the University are estimated according to the following table, excluding clothing and traveling expenses, for the University year of forty-one weeks:

Room rent,	from	$31.00	to	$ 52.00
Boarding,	"	70.00	to	103.00
Washing,	"	11.00	to	16.00
Lights and Incidentals,	"	20.00	to	20.00
Text Books (average),	"	10.00	to	10.00
Total,		$142.00		$201.00

To this must be added the tuition fees of those students who are required to pay tuition.

Parents and guardiahs are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

DISCIPLINE.

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises. A report is sent at the beginning of each term to parents or guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, or if he shall absent himself from recitation or morning roll call more than twice in any month, without good cause, the parent or guardian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is especially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his classmates that he be punctual in his place from the first day of the term till the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with those studies.

RELIGIOUS INSTRUCTION AND WORSHIP.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all the students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject:

"*Resolved*, That each student will be required to attend on Sabbath the public religious service of his choice, or, if he is a minor, as his parent or guardian may direct: but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

PRIZES.

THE REGENTS' PRIZES.—To the student who shall write the best essay upon a given subject, $25.00. To the student who shall be adjudged the best declaimer, $15.00. These prizes to be awarded after public competition, by a committee of citizens appointed by the Faculty.

These were awarded at the last contest as follows:

Essay—B. C. Wilson	$25 00
Declamation—A. C. Boyd	15 00

ENGLISH LITERATURE PRIZE.

A prize of $50.00 has been offered by the President of the University to the student who shall write the best essay on "The Genius of Shakespeare," and pass the best examination on the "Literature of the Elizabethan Age."

For the year 1886–7, this prize will be continued. The subject for essay will be, "John Milton: His Life and Works."

The subject for examination will be the Literature of the period 1620—1700.

PRIZE FOUNDATIONS.

The attention of those interested in the work of higher education, and especially in the work of the University, is respectfully called to the desirability of stimulating students to special excellence in some study, or in oratory, by offering prizes of money for competition. Citizens of our State who have the financial ability, could confer no more lasting benefit than by placing in the hands of the Board of Regents as a trust fund, a certain sum of money as a prize foundation, the interest of

which shall be annually offered as a prize for special excellence in some department of study. Whatever excellence is attained by the work of the University will react upon the whole system of State education, and be a stimulus to ambitious and deserving youth throughout the State.

AID FOR INDIGENT STUDENTS.

Many young men of our State are struggling against many obstacles in obtaining an education, the chief of which is poverty. They are compelled to work during a vacation to obtain funds for the expenses of the next year. Some of them go out to teach during the winter term and return in the spring. If the authorities of the University had at their disposal a sum of money which could be devoted annually to the relief of deserving young men of this class, it would be of great benefit and would relieve the students from many anxieties which inter fere with the successful prosecution of their studies. Those who have the means at their disposal and are inclined to assist this class of young men, might place in the hands of the Board of Regents a sum to be placed at interest, the interest to be annually applied to assisting indigent young men who show themselves worthy of help.

LIBRARY.

A respectable beginning towards a University Library has been made. About five thousand volumes have been carefully selected and placed on its shelves, including not only many choice and valuable books of reference, but also standard works in the various departments of History, Biography, Theology, Agriculture, Arts, Science and General Literature.

We respectfully request the friends of education to make contributions to its shelves.

A deposit of $2.00, or security from some professor or teacher, is required of all students who wish to avail themselves of the privileges of the Library. This is intended to secure the safe keeping and return of books borrowed.

The Library is open to students on Friday of each week and at such other times as the Librarian may find convenient.

READING ROOM.

Many of the journals of the State and valuable religious papers of some of the leading religious denominations are gratuitously sent to the reading room of the University. The leading periodicals of this country and Europe are regularly subscribed for and placed upon its files.

MUSEUM.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimes of animals. Such donations will be acknowledged and carefully labeled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

The vicinity of the University offers unrivaled advantages for the study of Practical Geology. Especial attention is paid to this branch.

Additional provision has recently been made for the study of Practical Geology by means of an annual excursion of four weeks with Prof. White through portions of West Virginia and of surrounding States.

DONATIONS TO THE MUSEUM.

J. E. Brown, Indian darts from Braddock's Field. Fossils from Preston county. Minerals from various places.

John C. McGahn, musket ball from Braddock's field.

Michael Chalfant, breast-bone of bird.

George C. Baker, head of large catfish.

William A. Earsemon, specimen of oil sand from Cherry Grove, Pa.

A. J. Montgomery, samples of oil and oil sand from Washington, Pa.

Harry L. Robinson, collection of birds' eggs.

LITERARY SOCIETIES.

There are two of these (the Parthenon and Columbian) in connection with the University, supplied with suitable halls, handsomely furnished, whose exercises in Composition, Reading, Oration, Debate and Criticisms are, in many resdects, of great advantage to the student. They also afford facilities for the study of an acquaintance with Parliamentary forms, and the acquisition of business habits. The authorities of the Universty will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during commencement week.

SCHEDULE OF HOURS AND CLASSES—University Department.

MONDAY.

8:20 a. m.	9 a. m.	10 a. m.	11 a. m.	12 m.	2 p. m.	3 p. m.	4½ p. m.
Junior Metaphysics.	Intermediate Greek.	Intermediate Latin.	Sen. Metaphysics.	Senior Met. (for 1886-7 only)	Anat., Phys. & Hy.	Chemistry.	Drill.
Junior English (1.)	Junior German.	Junior French.	Sen. English.		Jun. Rhetoric (1.)	Law.	
Junior Mathematics.	History.	Intermediate Math.	Sen. German.		Physics.		
Botany.	Junior English (2.)	Geology.	Jun. Greek.				
Analytical Chemistry.	Const. & Inter. Law.	Equity.	Equity (cont.)				

TUESDAY.

Junior Metaphysics.	Senior Greek.	Senior Latin.	Sen. Metaphysics.	Senior Met. (for 1886-7 only)	Anat., Phys. & Hy	Chemistry.	Drill.
Junior English (1.)	Junior German.	Junior French.	Sen. English.		Jun. Rhetoric (2.)	Law.	
Botany.	Junior English (2.)	Senior Mathematics.	Sen. French.		Agriculture.	Vocal Music.	
Analytical Chemistry.	Const. & Inter. Law.	Zoology.	Jun. Latin.				

WEDNESDAY.

Junior Metaphysics.	Intermediate Greek.	Intermediate Latin.	Sen. Metaphysics.	Senior Met. (for 1886-7 only)	Anat., Phys. & Hy.	Chemistry.	Drill.
Junior English (1.)	Junior German.	Junior French.	Sen. English.		Senior Rhetoric	Law.	
Junior Mathematics.	History.	Intermediate Math.	Sen. German.		Physics.		
Botany.	Junior English (2.)	Geology.	Jun. Greek.				
Analytical Chemistry.	Const. & Inter. Law.	Equity.	Equity (cont.)				

SCHEDULE OF HOURS AND CLASSES—Continued.

THURSDAY.

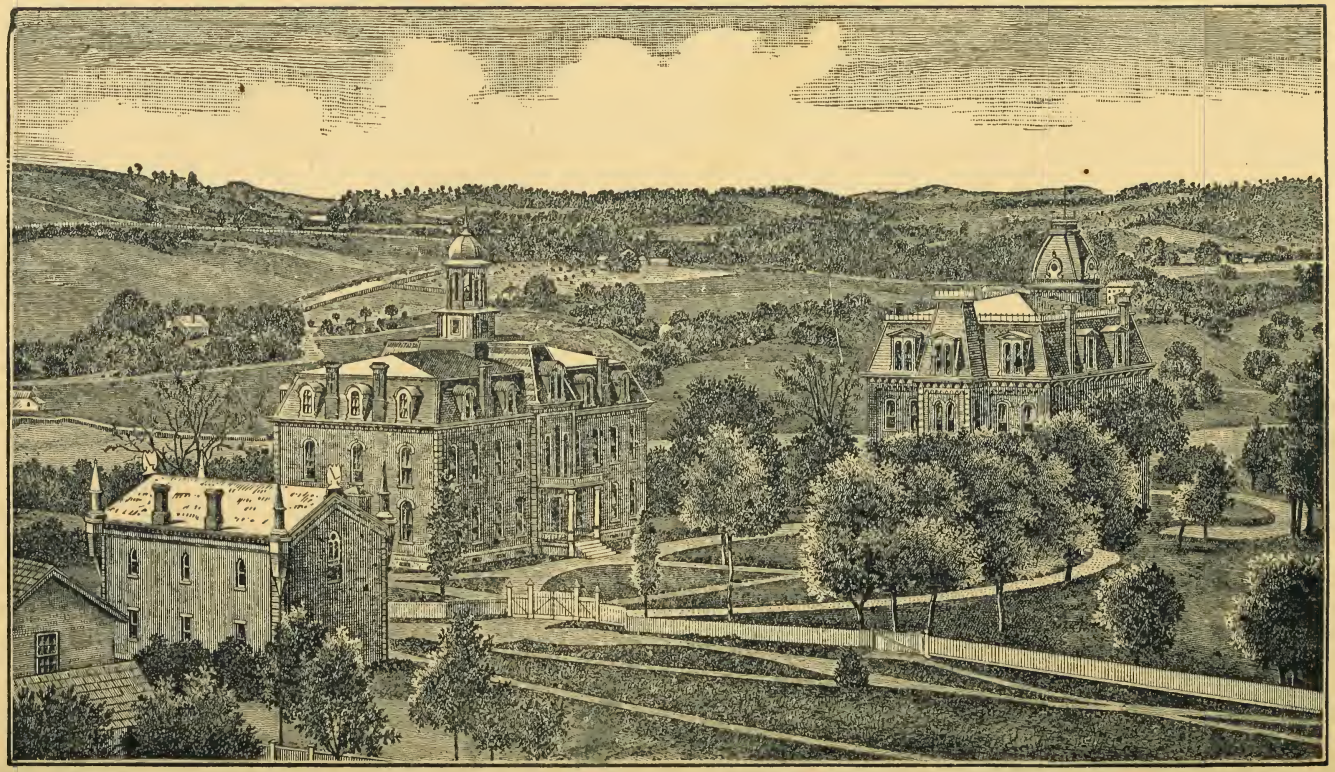
8:20 a. m.	9 a. m.	10 a. m	11 a. m.	12 m.	2 p. m.	3 p. m.	4½ p. m
Junior Metaphysics.	Senior Greek.	Senior Latin.	Sen. Metaphysics.	Senior Met. (for 1886-7 only.)	Anat., Phys. & Hy.	Chemistry.	Drill.
Junior English (1).	Junior German.	Junior French.	Senior English.		Preparatory Rhetoric (1.)	Law.	
Botany.	Junior English (2).	Senior Mathematics.	Senior French.			Vocal Music.	
Analytical Chemistry.	Const. and Inter. Law.	Zoology.	Junior Latin.		Agriculture.		

FRIDAY.

Junior Metaphysics.	Intermediate Greek.	Intermediate Latin.	Sen. Metaphysics.	Senior Met. (for 1886-7 only.)	Anat., Phys. & Hy.	Law.
Junior English.	Junior German.	Junior French.	Senior English.			
Junior Mathematics.	History.	Intermediate Math.	Senior German.		Preparatory Rhetoric (2).	
Botany.	Junior English (2).	Geology.	Junior Greek.		Physics.	
Analytical Chemistry.	Const. and Inter. Law.	Equity.				

SATURDAY.

	Junior Latin.	Zoology.				
	Law.					



CATALOGUE

OF

WEST VIRGINIA

UNIVERSITY

MORGANTOWN

FOR THE YEAR 1886-7

CHARLESTON
MOSES W. DONNALLY, PUBLIC PRINTER
1887

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CALENDAR.

The University year includes forty-one weeks, divided into three terms, beginning respectively the first Wednesday of September, the fourth Wednesday of November and the second Wednesday of March.

The ANNUAL COMMENCEMENT is on the second Thursday of June.

1887.

May 26th—June 4th. Final Examinations.

June 5th—Sunday, 11 A. M.—Baccalaureate Sermon by Rev. Joseph E. Smith, D. D., LL. D., of Buffalo, N. Y.

June 6th—Monday, 8 P. M.—Address before the Literary Societies by Hon. Wm. L. Wilson, of Charlestown, W. Va.

June 8th—Wednesday, 8 P. M.—Annual contest between the Literary Societies.

June 9th—Thursday, 9 A. M.—Commencement: 2 P. M. Alumni meeting: 4 P. M. Anniversary of West Virginia Historical Society.

September 6th—Tuesday—Entrance Examinations.

September 7th—Wednesday, 8:15 A. M. Fall term begins.

November 14th—22d—Fall examinations.

November 23d—Wednesday, 8:15 A. M.—Winter term begins.

November 24th—Thursday—Thanksgiving Holiday.

December 21st—Wednesday, 7 P. M.—Senior Orations.

December 23d—Friday—Christmas holidays begin.

1888.

January 4th—Wednesday, 8:15 A. M. Exercises resumed.

February 22d—Wednesday—Washington's birthday; holiday.

March 5th—13th—Winter examinations.

March 14th—Wednesday, 8:15 A. M.—Spring term begins.

May 30th—Wednesday, 8 P. M.—Regents' Prize Contest in Declamation.

June 1st—9th—Final examinations.

June 10th—14th—Commencement week.

BOARD OF REGENTS.

No. Dist.	Name of Regent	P. O. Address.
1.	J. B. SOMMERVILLE	Wellsburg.
2.	CLARENCE L. SMITH	Fairmont.
3.	PEREGRIN HAYS	Glenville.
4.	D. D. JOHNSON	Long Reach.
5.	JNO. G. SCHILLING	Spencer.
6.	EDWARD A. BENNETT	Huntington.
7.	JOSEPH E. CHILTON	Hamlin.
8.	CAMERON L. THOMPSON	Hinton.
9.	D. C. GALLAHER	Charleston.
10.	THOMAS J. FARNSWORTH	Buckhannon.
11.	JOSEPH MORELAND	Morgantown.
12.	JOHN A. ROBINSON	Patterson's Creek.
13.	E. W. BEDINGER	Charlestown.

OFFICERS OF THE BOARD.

JOHN A. ROBINSON, PRESIDENT.
JOHN I. HARVEY, TREASURER.
W. P. WILLEY, SECRETARY.

EXECUTIVE COMMITTEE.

JOHN A. ROBINSON, CHAIRMAN.
JOSEPH MORELAND.
CLARENCE L. SMITH.
D. D. JOHNSON.
D. C. GALLAHER.

SECRETARY.

W. P. WILLEY.

SUPERINTENDENT OF GROUNDS AND BUILDINGS.

LIEUT. JAMES L. WILSON.

WILLIAM DANSER, JANITOR.

Faculty and Teachers.

E. M. TURNER, LL.D., President.

Professor of Rhetoric.

D. B. PURINTON, A. M., Vice-President,

Professor of Metaphysics.

ROBERT C. BERKELEY, M. A.,

Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., Librarian,

Professor of Modern Languages and Literature.

I. C. WHITE, A. M., Ph.D.,

Professor of Geology and Natural History.

A. W. LORENTZ, A. M.,

Principal of Preparatory Department.

ST. GEORGE T. BROOKE,

Professor of Common and Statute Law.

W. P. WILLEY, A. M., SECRETARY,

Professor of Equity Jurisprudence and History

LIEUT. JAS. L. WILSON, 4TH U. S. ARTILLERY,

Professor of Mathematics and Military Science and Tactics

A. R. WHITEHILL, A. M.,

Professor of Agriculture, Chemistry and Physics.

REV. P. B. REYNOLDS, A. M.,

Professor of English.

L. S. BROCK, M. D.,

Acting Professor of Anatomy, Physiology and Hygiene

JAMES S. STEWART, M. S.,

Assistant in Preparatory Department.

GENERAL CATALOGUE OF STUDENTS.

ABBREVIATIONS.

Met.—Metaphysics. Math.—Mathematics. Lat.—Latin. Gr. Greek. A. L.—Ancient Languages. Ger.—German. Fr.—French. M. L.—Modern Languages. E.—English. H.—History. Ag.—Agriculture. Chem.—Chemistry. Ph.—Physics. Anat.—Anatomy, Physiology and Hygiene. G.—Geology. Bot.—Botany. Z. Zoology. R. Rhetoric. Preparatory Department—P.

Alderson, Bernard Calvin, Alderson, Monroe county. A. L., Math., E., Z.,

Alexander, Andrew Sterrett, Frazier's Bottom, Putnam county, P.

Anderson, James Evans, Morgantown, Monongalia county. P.

Baker, William H., Morgantown, Monongalia county. Law.

Bayles, Charles Nabors, Easton, Monongalia county. P.

Beamer, Erastus Houston, Pickaway, Monroe county. P., Ph., Bot, R.

Bee, Isaiah Ernest, Princeton, Mercer county. R., Ag., Chem., Ph., P.

Blackwood, Robert Edward Lee, St. Albans, Kanawha county. P., Rh., Law.

Blair, Robert Skyles, Jr., Ritchie C. H. M. L., Math., Anat., Z.

Blake, Ernest Emelius, Cox's Landing, Cabell county. Lat., Ger., E., R., P., Bot.

Boyd, Alfred Caldwell, Wheeling, Ohio county. H., Bot., Anat., G.

Brand, Harvey, Randall, Monongalia county. Math., A. L., E., Z.

Brown, James Edgar, Halleck, Monongalia county. L., Math., Ph., E., Ger., Ag.

Brown, Martin Luther, Halleck, Monongalia county. P., Ph.

Brown, Roscoe Conkling, Pentress, Monongalia county. P.

Burford, Edward Robert, Midway, Putnam county. P., E., Ph.

Casselberry, Byron Wright, Morgantown, Monongalia county. P., E., Bot.

Charles, John Edwin, Point Pleasant, Mason county. Met., G., Bot., Anat., Law.

Chilton, John Savrary, St. Albans, Kanawha county. P., Ph., R.

Clark, Frank Wells, New Martinsville, Wetzel county. P., Ph., E., R., Bot.

Cole, Gideon, Cassville, Monongalia county. P., Bot., Phys. & Hy.

Collins, Creed Haymond, Pennsboro, Ritchie county. P.

Corbly, Lawrence Jugurtha, Ripley's, Tyler county. P., Math., R., Bot.

Corpenning, George B., Clarksburg, Harrison county. P., E., Ger., Ph., Math., Ag.

Cox, Edward Wirt, Cox's Landing, Cabell county. A. L., Ger., Met., Z.

Cox, James Daniel, New Cambria, Kansas. Chem., Ger., Lat., Math., Met.

Crawford, John Allen, Wheeling, Ohio county. A. L., R., E., Math.

Cutlip, James E., Braxton C. H. A. L., E., R.,

Curtiss, William H., West Liberty, Ohio county. Law.

Daniell, Franklin Fleet, Reedy Ripple, Wirt county. P., R.

Davis, James Ewing, Maidsville, Monongalia county. P., R.

Davis, William Judson, ——— Mason county. P., Ph.

Davis, William Robinson, Piedmont, Mineral county. P.

Dawson, James Evans, Morgantown, Monongalia county. A. L., Met., R., Chem., Bot.

Dawson, Richard William, Morgantown, Monongalia county. Law.

Deahl, Jasper Newton, Moatsville, Barbour county. P., E., R., Math.

Devault, Ira G., White Day, Monongalia county. P.

Dupuy, Alexander, Morgantown, Monongalia county. R., Math., Law.

Elliott, Edward Startzman, Kingwood, Preston county. G., Law.

Emmert, Howard Harbaugh, Hagerstown, Md. Met., Math., Ph., H., Ag., Phys. & Hy.

Finnell, Charles Newton, Morgantown, Monongalia county. A. L., Met., E., Z.

Flesher, Paul, Jackson C. H. P., Bot.

Foster, John Drabell, Morgantown, Monongalia county. P.

Francis, John Wiley, Moundsville, Marshall county. P., Bot.

Fredlock, Armistead Montgomery, Piedmont, Mineral county. P., Anat., R., Bot., Ger.

Gardner, William H. Harrison, West Columbia, Mason county. P., R., Ph.

Getzendaner, Franklin Clifford, Kearneysville, Jefferson county. Anat., Chem., Fr., E.

Goff, Charles Page, Beverly, Randolph county. Ph., Ag., G., H., Z.

Goodwin, Charles Allen, Morgantown, Monongalia county. Chem., Ag., P.

Gregg, John Morton, Morgantown, Monongalia county. M. L., Chem., Ag., H., R., Bot., Math.

Grier, Charles Wells, Parkersburg, Wood oounty. P.

Grier, John Alexander, Parkersburg, Wood county. P.

Hackney, Joseph Milton, Morgantown, Monongalia county. P., Math., R., E.

Hall, Clark Bare, Morgantown, Monongalia county. P.

Hall, Ira Ephraim, Laurel Point, Monongalia county. P.

Hare, Alfred Jarett, Grafton, Taylor county. A. L., E., Met.

Hartmeyer, Christian, Bruceton, Preston county. A. L., Met., Ph., Chem.

Harvey, Cameron, Morgantown, Monongalia county. P., Ger.

Hawthorne, J. E., Morgantown, Monongalia county. Chem., Anat.

Hayes, Ernest Eugene, Morgantown, Monongalia county. P.

Hayes, Ulysses S. Grant, Belington, Barbour county. E., R., Math., Ph., H., Fr., Ag.

Heiner, Gordon Graham, Jefferson county. A. L., Fr., Math., R., Z.

Helmick, McClellan Daniel, Morgantown, Monongalia county. A. L., Met., Math., G., Anat.

Henry, Elijah Commodore, Laurel Point, Monongalia county. P.

Henshaw, John Snodgrass, Martinsburg, Berkeley county. P., E., R.

Henshaw, William Thornton, Martinsburg, Berkeley county. Anat., G., Z, Chem., Bot.

Hite, Bert Holmes, Morgantown, Monongalia county. E., Math., Anat., Chem., Z., H.

Holmes, William Howard, Clarksburg, Harrison county. P., Bot., Phys. & Hy.

Hornor, Hugh Mortimore, Dayton, Harrison county. P., R., E.

Houston, Hough, Easton, Monongalia county. P., Bot., Ph.

Jackson, Alfred Despard, Newark, Ohio. P., Ph.

Jackson, James Adolphus, Kingwood, Preston county. A. L., Math., E., R.

Jaco, Lin Milton, Easton, Monongalia county. P., H.

Jemison, David Lee, Laurel Point, Monongalia county. A. L., Met., Chem., Z.

Jemison, Luther Lee, Laurel Point, Monongalia county. P., B.

Joliffe, Worth Worthington, White Day, Monongalia county. P., E., Ph., Z.

Jones, Vergil Newton, Palatine, Marion county. P., R.

Keenan, Leonidas Hamilton, Maidsville, Monongalia county. Law.

Knee, Edward Joseph, Piedmont, Mineral county. P., Ph.

Lazzell, Joseph Edson, Maidsville, Monongalia county. R., Fr., Ag., Ph., Math.

Lazzell, William Hite, Maidsville, Monongalia county. P.

Leavitt, Pierce, New England, Wood county. Met., E., R., Chem.

Lemly, Casslus McCarl, Burton, Wetzel county. P., Bot.

Lewellen, Willis Burr, Grafton, Taylor county. P., Bot.

Lindemuth, Louis August, Wheeling, Ohio county. A. L., Ger., Math., E.

Long, James Henderson, South Side, Mason county. P., E., Ph., Z.

Lowe, John William, Shinnston, Harrison county. E., R., P., Law.

Lynch, Tillman Danis, Craigmoor, Harrison county. P., H.

Lyons, William Alexander, Easton, Monongalia county. P., E.

Mann, Edwin, Fort Spring, Greenbrier county. P., Ph., H.

Martin, Henry Norman, Milton, Cabell county. Law.

Maxwell, Franklin Porter, Romines Mills, Harrison county. P.

May, Henry Clay, Griffithsville, Lincoln county. Law.

McCay, John William, Middlebourne, Tyler county. P., E. Ph., Inter. law.

McDermitt, Robert Andrew, St. Albans Kanawha county. P., Chem.

McElroy, Milton Luther, Laurel Point, Monongalia county. P., R., H., Bot.

McGrath, John M., Ronceverte, Greenbrier county. Law.

McIntire, Ulysses Grant, Elk Garden, Mineral county. P., Chem.

Meighen Thomas Hughes, Moundsville, Marshall county. P., Bot.

Melvin, William Jackson, Duffields, Jefferson county P., Chem., E., Anat.

Miller, Edgar Lee, Cassville, Monongalia county. P., Phys. & Hy.

Montgomery, James Lewallen, Fayetteville, Fayette county. P., E.

Morgan, William Henry, Morgantown, Monongalia county. P., Bot.

Morgan, William Steenbergen, Grimm's Landing, Mason county. P., E., Ph., Z

Morris, Addison Ferd, Milton, Cabell county. P., R., Ph., E.

Morris, Russell Love, Teay's, Putnam county. P., R.

Musgrave, William Emmett, West Columbia, Mason county. P., R., Ph.

Neal, George Ira, Milton, Cabell county, R., E., Chem., Ph., P.

Nuzum, John, Jackson C. H. P.

Ogden, Herschel Coombs, Fairmont, Marion county. A. L., H., G., Met, Bot., Anat.

Orwen, Rensellaer Lee, Kingwood, Preston county. P.

Peck, John Edwin, White's Mills, Logan county. Math., E., R., Lat., Ger.

Pell, Millard, Masontown, Preston county. A. L., Bot , E., R., H.

Porter, Richard Clark, New Cumberland, Hancock county. P., E., Ph., R.

Post, Melville Davisson, Romines Mills, Harrison county. P.

Rankin, Charles, Moundsville Marshall county. P., R., E., Ger., Math., Z.

Rector, Thomas Gaylord, Briscoe Run, Wood county. Met., Chem., G., Anat., H.

Reed, Stuart Felix, Elk city, Barbour county. P . E., Ger., R., Bot.

Reynolds, Frank Cornelius, Keyser, Mineral county. A. L., Math., R., H., Chem.

Reynolds, Wayland Fuller, Morgantown, Monongalia county. A. L., Ag., Chem., R., Z.

Riggle, Christian Beall, Middlebourne, Tyler county. E., L., Math., R., Chem., Bot., Anat.

Robinson, George Pomeroy, Baltimore, Md. Anat , E., G., Fr.

Roemer, John Lincoln, Wheeling, Ohio county. A. L , Met., R., Ph.

Romine, Albert Lee, Lost Creek, Harrison county. Law.

Ross, Florian Gaie, Dunkard, Pa. P.

Ross, John Francis, Stevartstown, Monongalia county. P.

Ross, Raphael Herbert, Waverly, Wood county. P., H., Bot.

Rucker, Edgar Parks, Lewispurg, Greenbrier county. Law.

Ryland, Henry Halleck, Fairchance, Pa. A. L., Met., Nat. Hist.

Rymer, William Andrew, Ritchie C. H. P., R., Chem., E.

Sebrell, Frank Gordon, Grimm's Landing, Mason county. P.

Shaffer, Phil Austin, Tunnelton, Preston county. P , Ph., R., Bot.

Sheppard, Addison Hite, Reedy Ripple, Wirt county. P.

Shirkey, William David, Sissonville, Kanawha county. P.

Shriver, Ernest, Pentress, Monongalia county. P.

Sisler, Charles Benton, Stewartstown, Monongalia county. P., Bot.

Sisler, Milliard T., Stewartstown Monongalia county. P., Ph.

Sivey, William Mount, Briscoe Run, Wood county. P.

Sloan, Paul, Burlington, Mineral county. P., Ag., Chem., Bot.

Smith, Edward Grandison, West Milford, Harrison county. P., E., R.

Smith, Harry W., Ripley's, Tyler County. P.

Smith, Jasper Washington, Morgantown, Monongalia county. Law.

Smith, Milton Ellsworth, Morgantown, Monongalia county. P., R., Ph.

Snider, Frank, Easton, Monongalia county. M. L., Met., Z., G.

Snider, Milliard Fillmore, New Milton, Doddridge county. Law.

Stallings, A. Roblnette, Medley, Grant county. P., Bot.

Steuart, William Benjamin, Georgetown, Monongalia county. P., E.

Steuart, William Ewing, Morgantown, Monongalia county. P., Chem., Anat.

Stifel, Edward William, Wheeling, Ohio county. P., Ger., Chem.

Stimmel, James Y., Burlington, Mineral county. P., Bot.

Stoetzer, Herman G., Wheeling, Ohio county. A. L., Ger., Met., R., Chem., Z.

Stortz, John Christian, Point Pleasant, Mason county. P.

Stribling, Taliaferro, Point Pleasant, Mason county. Math., Ger., A. L., E., R.

Stuart, Olney Boaz, Arnettsville, Monongalia county. Anat., P.

Swan, Leroy L., Middlebourne, Tyler county. G., Fr., Chem., Anat., Ag.

Thompson, John Perry, Wolf Summit, Harrison county. Math., E., Lat., Chem.

Turner, George Hill, Parkersburg, Wood county. Fr., H., Met.

Walls, Joseph Laughlin, Pisgah, Preston county. Law.

Warden, Samuel Watson, Charleston, Kanawha county. L., Math., Chem., R., E., Bot.

Wees, Boyd, Leadsville, Randolph county. E., H., Ph., Ag., P., Bot.

Wells, Charles Augustus, Charleston, Kanawha county. P.

White, Charles Lewis, Morgantown, Monongalia county. A. L., R., P.

White, DeWitt, Morgantown, Monongalia county. A. L., R., P.

White, Prescott Cushing, Morgantown, Monongalia county. A. L., R., P.

White, William James, Maple, Monongalia county. Met., A. L., Chem., Z.

Whitehead, William Goheen, Arbuckle, Mason county. Z., P., Anat., Bot.

Wilson, Thomas Macaulay, Laurel Point, Monongalia county. Met., L , Anat , Z

Woodson, Elmon Edwin, Beckwith, Fayette county. P., Math., E.

Yost, Larnard Hill, Basnett, Marion county. M. L., Ag., Chem.

Total .....169.

PREPARATORY STUDENTS.

Name.	Residence.	County.
Alexander, A. S.	Frazier's Bottom	Putnam county.
Anderson, J. E.	Morgantown	Mnongalla county
Bayles, C. N.	Easton	" "
Beamer, E. H.	Pickaway	Monroe county.
Bee, I. E.	Princeton	Mercer county.
Blackwood, R. E. L.	St Albans	Kanawha county.
Brown, M. L.	Halleck	Monongalia county.
Brown, R. C.	"	" "
Burford, E. R	Midway	Putnam county
Casselberry, B. W.	Morgantown	Monongalia county.
Chilton, J. S.	St. Albans	Kanawha county.
Clark, F. W.	New Martinsville	Wetzel county.
Cole, Gideon	Cassville	Monongalia county.
Collins, C. H	Pennsboro	Ritchie county.
Corbly, L. J.	Ripley's	Tyler county
Corpenning, G. B	Clarksburg	Harrison county.
Daniell, F. F.	Reedy Ripple	Wirt county.
Davis, J. E.	Maidsville	Monongalia county.
Davis, W. J.		Mason county.
Davis, W. R	Piedmont	Mineral county.
Deahl, J. N.	Moatsville	Barbour county.

Devault, I. G.	White Day	Monongalia county.
Flesher, P.	Jackson, C. H.	Jackson county.
Francis, J. W.	Moundsville	Marshall county.
Fredlock, A. M.	Piedmont	Mineral county,
Gardner, W. H. H.	West Columbia	Mason county.
Goodwin, C. A.	Morgantown	Monongalia county.
Grier, C. W.	Parkersburg	Wood county.
Grier, J. A.	"	" "
Hackney, J. M.	Morgantown	Monongalia county.
Hall, C. B.	Morgantown	Monongalia county.
Hall, I. E.	Laurel Point	" "
Harvey, C.	Morgantown	" "
Hayes, E. E.	"	" "
Henry, E. C.	Laurel Point	" "
Henshaw, J. S.	Martinsburg	Berkeley county.
Holmes, W. H.	Clarksburg	Harrison county.
Hornor, H. M.	Dayton	" "
Houston, H.	Easton	Monongalia county.
Jackson, A. D.	Newark, Ohio	
Jaco, L.	Easton	Monongalia county.
Jemison, L. L.	Laurel Point	" "
Joliffe, W.	White Day	" "
Jones, V. N.	Palatine	Marion county.
Knee, E. J.	Piedmont	Mineral county.
Lazzell, W. H.	Maidsville	Monongalia county.
Lemly, C. M.	Burton	Wetzel county.
Lewellen, W. B.	Grafton	Taylor county.
Long, J. H.	Arbuckle	Mason county.
Lowe, J. W.	Shinnston	Harrison county.
Lynch, T. D.	Craigmoor	" "

Lyons, W. A.	Easton	Monongalia county
Mann, E.	Fort Spring	Greenbrier county.
Maxwell, F. P	Romine's Mills	Harrison county.
McCay, J. W	Middlebourne	Tyler county.
McDermitt, R A	St. Albans	Kanawha county.
McElroy, M. L.	Laurel Point	Monongalia county
McIntire, U. G	Elk Garden	Mineral county.
Meighen, T. H	Moundsville	Marshall county.
Melvin, W. J.	Duffield's	Jefferson county.
Montgomery, J. L.	Fayetteville	Fayette county.
Morgan, W. H	Morgantown	Monongalia county
Morgan, W. S.	Grimm's Landing	Mason county.
Morris, A. F	Milton	Cabell county.
Musgrave, W. E	West Columbia	Mason county.
Neal, G. I	Milton	Cabell county.
Nuzum, J	Jackson C. H.,	Jackson county.
Orwen, R. L.	Kingwood	Preston county.
Peck, J. E	White's Mills	Logan county.
Porter, R. C.	New Cumberland	Hancock county.
Post, Melville D.	Romines Mills	Harrison county.
Reed, L. F	Elk City	Barbour county.
Ross, F. G.	Dunkard	Pa.
Ross, J. F	Stewartstown	Monongalia county.
Ross, R. H	Parkersburg	Wood county.
Rymer, W. A.	Ritchie C. H.,	Ritchie county.
Sebrell, F. G	Grimm's Landing	Mason county.
Shaffer, P. A	Tunnellton	Preston county.
Sheppard, A. H	Reedy Ripple	Wirt county.
Shirkey, W. D	Sissonville	Kanawha county.
Shriver, E	Pontress	Monongalia county.

Sisler, C. B.	Stewartstown	Monongalia county.
Sisler, M. T.	"	" "
Sivey, W. M.	Briscoe Run	Wood county.
Sloan, P.	Burlington	Mineral county.
Smith, E. G.	West Milford	Harrison county.
Smith, H. W.	Ripley's	Tyler county.
Smith, M. E.	Morgantown	Monongalia county.
Stallings, A. R.	Medley	Grant county.
Steuart, W. B.	Georgetown	Monongalia county.
Steuart, W. E.	Morgantown	" "
Stifel, E. W.	Wheeling	Ohio county.
Stimmel, J. Y.	Burlington	Mineral county.
Stortz, J. C.	Point Pleasant	Mason county.
Stuart, O. B.	Arnettsville	Monongalia county.
Wees, Boyd	Leadville	Randolph county.
Wells, C. A.	Charleston	Kanawha county.
White, C. L.	Morgantown	Monongalia county.
White, D. W.	Morgantown	" "
White, P. C.	Morgantown	" "
Whitehead, W. G.	Arbuckle	Mason county.
Woodson, F. E.	Beckwith	Fayette county.
Total		103.

NOTE.—Many of the foregoing lift have one or more studies in the University Department.

NUMBER IN THE SEVERAL SCHOOLS.

School of Rhetoric:

Junior	36
Senior	14

School of Metaphysics:

Junior	18
Senior	6

School of Ancient Languages:

Junior Latin	17
Intermediate Latin	11
Senior Latin	3
Junior Greek	9
Intermediate Greek	6
Senior Greek	2

School of Modern Languages:

Junior French	7
Senior French	4
Junior German	20

Senior German 4

School of Geology and Natural History:

Botany 37

Geology 10

Zoology 18

School of History: 19

School of Mathematics:

Junior 23

Senior 2

School of Agriculture, Chemistry and Physics:

Agriculture 14

Chemistry 33

Physics 32

School of English:

Junior 27

Senior 21

School of Anatomy, Physiology and Hygiene 28

School of Law: 17

Preparatory Department: 32

Some Study in Preparatory Department: 103

RECAPITULATION.

BY COUNTIES IN WEST VIRGINIA.

Barbour	3
Berkeley	2
Braxton	1
Cabell	4
Doddridge	1
Fayette	2
Grant	1
Greenbrier	3
Hancock	1
Harrison	10
Jackson	2
Jefferson	3
Kanawha	6
Lincoln	1
Logan	1
Marion	3
Marshall	3
Mason	10
Mercer	1
Mineral	7
Monongalia	59
Monroe	2

Ohio	7
Preston	7
Putnam	3
Randolph	2
Ritchie	3
Taylor	2
Tyler	5
Wetzel	2
Wirt	2
Wood	7
Total	163

RECAPITULATION BY STATES,

West Virginia	163
Pennsylvania	2
Maryland	2
Kansas	1
Ohio	1
Total	169

NUMBER OF STUDENTS EACH YEAR.

The following is an exhibit of the number of Students enrolled annually from the beginning:

The year 1867–8 shows a total of 124.

The year 1868–9, shows a total of 154.

The year 1869–70 shows a total of 161.

The year 1870–1 shows a total of 166.

The year 1871–2 shows a total of 159.

The year 1872–3 shows a total of 144.

The year 1873–4 shows a total of 138.

The year 1874–5 shows a total of 125.

The year 1875–6 shows a total of 96.

The year 1876–7 shows a total of 93.

The year 1877–8 shows a total of 118.

The year 1878–9 shows a total of 135.

The year 1879–80 shows a total of 132.

The year 1880–1 shows a total of 162.

The year 1881–2 shows a total of 177.

The year 1882–3 shows a total of 159.

The year 1883–4 shows a total of 93.

The year 1884–5 shows a total of 107.

The year 1885–6 shows a total of 136.

The year 1886–7 shows a total of 169.

VOCAL MUSIC.

D. B. PURINTON, A. M., Instructor.

The course of Instruction embraces one year, as follows:

FALL TERM—Rudiments and Elementary Practice.

WINTER TERM—Rudiments Continued, Glee and Chorus Singing.

SPRING TERM—Lectures on Harmony and Composition. Theory of Music and Musical Form, with original exercises in Harmony ann Composition.

STUDENTS. 1886-7.

Alexander, A. S.
Boyd, A. C.
Brown, M. L.
Burford, R. E.
Clark, F. W.
Corbly, L. J.
Francis, J. W.
Jones, V. N.
McCay, J. W.
Ogden, H. C.
Orwen, R. L.
Peck, J. E.
Pell, M.
Reed, S. F.
Sisler, M. T.
Stimmel, J. Y.
Sivey, W. M.
Smith, E. G.
Wees, B.

UNIVERSITY GLEE CLUB.

U. S. G. Hayes	First Tenor.
C. L. White	First Tenor.
D. W. White	Second Tenor.
P. C. White	Second Tenor.
L. J. Corbly	First Bass.
W. G. Whitehead	First Bass.
D. L. Jemison	Second Bass.
E. P. Rucker	Second Bass.

Roster of the Military Department.

JAMES. L. WILSON,

First Lieutenant 4th U. S. Artillery, Commandant of Cadets.

Roster of Cadet Officers and Non-Commissioned Officers.

Battalion Staff.

Cadet D. L. Jemison.....1st Lieut. and Adjutant.

Cadet J. E. Lazzell .....Sergeant Major.

Color Guard.

Cadet U. S. G. Hayes.....Color Sergeant.

Cadet Ed. Mann.....Corporal.

Cadet Phil. A. Shaffer.....Corporal.

Cadet J. A. Jackson.....Corporal.

Company "A."

Cadet J. E. Charles.....Captain.

Cadet R. W. Dawson.....1st Lieutenant.

Cadet W. T. Henshaw.....2d Lieutenant.

Non-Commissioned officers.

Cadet J. E. Brown ..... 1st Sergeant.

Cadet L. A. Lindemuth ..... 2d Sergeant.

Cadet G. B. Corpenning ..... 3d Sergeant.

Cadet H. C. Ogden .. —— ..... Corporal.

Cadet E. E. Woodson ..... Corporal.

Cadet J. S. Chilton ..... Corporal.

Company "B."

Cadet E. S. Elliot ..... Captain.

Cadet Leroy Swan ..... 1st Lieutenant.

Cadet H. G. Stoetzer ..... 2nd Lieut. and Ordinance Officer.

Non-Commissioned Officers.

Cadet H. H. Emmert ..... 1st Sergeant.

Cadet J. E. Dawson ..... 2d Sergeant.

Cadet Charles Rankin ..... 3d Sergeant.

Cadet J. A. Crawford ..... Corporal.

Cadet W. F. Reynolds ..... Corporal.

Cadet J. L. Montgomery ..... Corporal.

Drum Corps.

Cadet R. E. Burford ..... Fifer.

Cadet M. L. McElroy ..... Tenor Drummer.

Cadet W. M. Sivey ..... Bass Drummer.

General Roster of State Cadets.

DISTRICT I.

Name.	*County.*	*When Enlisted.*	*Status.*
Boyd, Geo. E., Jr.	Ohio	September 30, 1882	Graduated June 10, 1886.
Stoetzer, H. G.	Ohio	September 3, 1884	Present.
Lindemuth, L. A.	Ohio. *Brooke.	September 2, 1885	Present.
Crawford, J. A.	Ohio. *Brooke.	September 1, 1885	Present.
Boyd, A. C.	Ohio	September 1, 1885	Resigned March 25, 1887.
Porter, R. C.	Hancock	September 3, 1885	Resigned Feb. 28, 1887.
Heiner, G. G.	Jefferson. *Ohio.	April 4, 1887	Present.

DISTRICT II.

Cox, J. D.	Marion	March 24, 1882	Discharged March 8, 1887.
Jones, V. N.	Marion	September 21, 1885	Present.
Ogden, H. C.	Marion	September 3, 1885	Present.
Roemer, J. L.	Ohio. *Marshall.	September 2, 1886	Present.
Francis J. W.	Marshall	September 13, 1886	Present.

DISTRICT III.

Corpenning, G. B.	Harrison	September 1, 1885	Present.
Rymer, W. A.	Ritchie	September 15, 1885	Present.
Post, M. D.	Harrison	September 1, 1886	Present.
Lynch, T. D.	Harrison	September 10, 1886	Present.
Smith, E. G.	Harrison	September 6, 1886	Resigned Feb. 18, 1887.
Holmes, W. H.	Harrison	March 15, 1887	Present.

*County to which accredited.

DISTRICT IV.

Name.	*County.*	*When Enlisted.*	*Status.*
Turner, Geo. H.	Wood	September 3, 1884	Resigned March 8, 1887.
Ross, R. H.	Wood	September 1, 1886	Present.
Sivey, W. M.	Wood	September 1, 1886	Present.
Smith, H. W.	Tyler	March 8, 1887	Present.
Grier, J. A.	Wood	March 15, 1887	Present.

DISTRICT V.

Charles, J. E.	Mason	September 5, 1883	Present.
Musgrave, E. C.	Mason	March 19, 1884	Discharged Sept. 2, 1886.
Hassler, A.	Jackson	September 1, 1885	Discharged Sept. 2, 1886.
Stribling, T.	Mason	September 21, 1885	Present.
Nuzum, John	Jackson	September 9, 1886	Present.
Flesher, Paul	Jackson	September 1, 1886	Present.
Morgan, W. S.	Mason	September 1, 1886	On leave of absence.

DISTRICT VI.

Brown, J. E.	Marion.. / *Putnam..	November 22, 1885	Present.
Morris, R. L.	Putnam	September 1, 1885	Present.
Mann, E.	Cabell	September 14, 1885	Present.
Neal, George I.	Cabell	March 10, 1886	Present.
Foster, J. D.	Monongalia.. / *Wayne	September 1, 1886	Present.
Musgrave, W. E.	Mason / *Wayne	September 1, 1886	Present.

DISTRICT VII.

Robinson, G. P.	Kanawha. / *Logan	September 7, 1883	Disch'd March 8, 1887.
Chilton, J. S.	Kanawha. / *Lincoln	September 1, 1885	On leave of abenae.
McElroy, M. L.	Monongalia / *Raleigh	September 3, 1885	Present.

*County to which accredited.

Name.	*County.*	*When Enlisted.*	*Status.*
McConaha, W. A.	Kanawha. *Boone	September 1, 1885	Disch'd Sept. 2, 1886.
Bee, I. E.	Mercer	January 22, 1886	Present.
Peck, J. E.	Logan	September 3, 1886	Present.

DISTRICT VIII.

Woodson, E. E.	Fayette	September 11, 1885	Present.
Beamer, E. H.	Monroe	September 1, 1885	Present.
Nickell, F. H.	Monroe	September 1, 1885	Disch'd Sept. 1, 1886.
Montgomery, J. L.	Fayette	September 3, 1885	On leave of absence.
Whitehead, W. G.	Summers	January 6, 1886	Present.
Alderson, B. C.	Monroe	September 1, 1886	Present.

DISTRICT IX.

Wilson, B. C.	Kanawha	September 5, 1883	Resigned April 29, 1886.
Cutlip, J. E.	Braxton	September 5, 1884	Resigned Feb. 25, 1887.
Reynolds, W. F.	Kanawha	September 1, 1885	Present.
Blackwood, R. E. L.	Kanawha	January 6, 1886	Present.
McDermit, R. A.	Kanawha	January 1, 1886	Present.
Alexander, A. S.	Putnam *Clay	January 1, 1886	Present.
Wells, C. A.	Kanawha. *Braxton	March 15, 1886	Present.

DISTRICT X.

Helmick, M. D.	Lewis	September 22, 1884	Discharged March 8, 1887.
Wees, Boyd	Randolph	March 10, 1886	Present.
Armstrong, R. A.	Upshur	March 8, 1882	Graduated June 20, 1886.
Moore, J. H.	Barbour	March 25, 1885	Discharged Sept. 2, 1886.
Hayes, U. S. G.	Barbour	March 26, 1885	Present.
Shaffer, Phil A.	Preston.. *Barbour.	September 9, 1886	Present.
Maxwell, F. P.	Harrison.. *Lewis	November 10, 1886	Present.

* County to which accredited.

DISTRICT XI.

Name.	*County.*	*When Enlisted.*	*Status.*
Lazzell, J. E.	Monongalia	September 5, 1885.	Present.
Jemison, D. L.	Monongalia	September 5, 1883.	Present.
White, W. J.	Monongalia, *Putnam	September 14, 1883	Discharged March 8, 1887.
Elliott, E. S.	Preston	September 10, 1884	Present.
Bishop, C. Y.	Preston	September 1, 1885	Discharged Sept. 2, 1886.
Jackson, J. A.	Preston	September 1, 1886.	Present.
Ross, J. F.	Monongalia	September 1, 1886.	Present.

DISTRICT XII.

Henshaw, W. T.	Berkeley, *Hampshire	October 28, 1881	Present.
Reynolds, F. C.	Mineral	March 10, 1886	Present.
McIntire, U. G.	Mineral	March 15, 1886	Present.
Knee, E. J.	Mineral	September 5, 1885	Discharged March 4, 1887.
Stallings, A. R.	Grant	September 1, 1886.	Present.
Jolliffe, W. W.	Monongalia, *Grant	December 9, 1886	Present.

DISTRICT XIII.

Dawson, R. W.	Monongalia, *Morgan	September 5, 1881	Graduated June 10, 1886.
Emmert, H. H.	Berkeley	September 5, 1881.	Present.
Shepherd, T. R.	Jefferson	September 6, 1883	Graduated June 10, 1886.
Morgan, W. A.	Jefferson	September 9, 1885	Discharged Sept. 2, 1886.
Getzendaner, F. C.	Jefferson	September 9, 1885	Discharged Mar. 8, 1887.
Melvin, W. J.	Jefferson	September 15, 1886	Present.
Henshaw, J. S.	Berkeley	September 1, 1885	Present.
Sisler, C. B.	Monongalia, *Morgan	September 1, 1886.	Present.

*County to which accredited.

VOLUNTEER CADETS.

Name.	*Residence.*	*When Enlisted.*	*Status.*
Swan, Leroy	Tyler	September 20, 1882	Present.
Robinson, H. M	Maryland	September 1, 1885	Discharged Sept. 2, 1886.
Runkin, Charles	Marshall	March 16, 1886	Present.
Montgomery, F. H.	Kanawha	September 5, 1885	Dischargrd Sept. 2, 1886.
Ryland, H. H	Pennsylvania	September 10, 1885	Discharged Sept. 2, 1886.
Stifel, E. W	Ohio County.	October 12, 1885	Present.
Orwen, R. L	Preston	September 1, 1886	On leave of absence.
Sebrell, F. G	Mason	September 1, 1886	On leave of absence.
Long J. H	Mason	September 1, 1886	Present.
Sisler, M. T	Monongalia	September 1, 1886	Present.
Davis, W. R	Mineral.	September 2, 1886	Resigned March 8, 1887.
Brown, R. C	Monongalia	September 9, 1886	Present.
Dawson, J. E	Monongalia	September 5, 1885	Present.
Rucker, E. P	Greenbrier	September 15, 1886	Present.
Blake, E. E.	Cabell	September 27, 1886	Present.
Dawson, R. W	Pennsylvania	September 2, 1884	Present.
Burford, R. E	Putnam county	September 29, 1886	Present.
Clark, F. W	Wetzel county	November 30, 1886	Present.
Gardner, W. H. H	Mason county	January 5, 1887	On leave of absence.
Lemley, C. McC	Wetzel county	March 9, 1887	Present.
Ross, F. G	Pennsylvania	March 9, 1887	Present.
Stortz J. C	Mason county	February, 1887	Present.

Distinguished Cadets, 1885-6.

Armstrong, R. A.	Military.
Boyd, G. E., Jr	"
Brown, J. E	"
Blackwood, R. E. L	"
Chilton, J. S	"
Dawson, R. W.	"
Corpenning, G. B	"
Elliott, E. S	"
Helmick, M. D	"
Jones, V. N	"
Lindemuth, L. A	"
Musgrave, E. C	"
McElroy, M. L.	"
Montgomery, J. L.	"
Neal, G. I	"
Robinson, G. P	"
Rankin Charles	"
Reynolds, W. F.	"
Rymer, W. A	"
Stribling, T	"
Stifel, E. W	"
Turner, G. H	"
White, W. J	"
Woodson, E. E	"

DEGREES CONFERRED AT THE COMMENCEMENT

JUNE 10, 1886.

HONORARY DEGREE OF DOCTOR OF LAWS.

Hon. Waitman T. Willey, Morgantown, W. Va.

Hon. George M. Edgar, President of Arkansas Industrial University.

Rev. Joseph E. Smith, D. D., Buffalo, N. Y.

MASTER OF ARTS (in course)

George C. Baker.
Luther M. Boyers.
Benjamin Brown.
Samuel B. Brown.
George B. Foster.
Walter Hough.
Isaac G. Lazzell.
J. E. Musgrave.
Jacob F. Corke.

MASTER OF SCIENCES (in course).

William T. Bland.
S. P. Wells.
John L. Johnston.

BACHELOR OF ARTS.

Robert A. Armstrong.
W. N. Berkeley, Jr.
Richard W. Dawson.
Thomas R. Shepherd.
Nacy M. Waters.

BACHELOR OF SCIENCES.

Zoath F. Yost.

BACHELOR OF LAWS.

George C. Baker.
George E. Boyd, Jr.
Luther M. Boyers.
Clarence B. Dille.
Richard E. Fast.
Samuel M. Musgrove.
Harold L. Robinson.

DIPLOMAS TO GRADUATES IN SCHOOLS.

Armstrong, R. A.....Metaphysics, Natural History.
Berkeley, W. N., Jr..Metaphysics, German, Natural History.
Blair, R. S., Jr.....Chemistry.
Boyd, A. C .....Chemistry.
Brown, J. E.....History.
Bush, A. B.....Chemistry.
Charles, J. E.....German, Mathematics, Physics, English.
Corpenning, G. B....History.
Cox, E. W.....Physics.
Cox, J. D.....Chemistry, Physics.
Crawford, J. A.....Chemistry.
Cutlip, J. E.....Physics.
Dawson, R. W.....Metaphysics. Natural History, English.
Dupuy, A.....History.
Elliott, E. S.....Metaphysics, Chemistry, English.
Emmert, H. H.....French, Chemistry, English.
Getzendaner, F. C...Chemistry.
Goff, C. P.....Chemistry.
Helmick, M. D.....Chemistry, English.
Henshaw, W. T.....French, History, Physics.
Hartmeyer, C.....English.
Jemison, D. L.....English, History.
Lazzell, J. E.....History.
Ogden, H. C.....German, Mathematics.
Rector, T. G.....German, Mathematics, Chemistry, English.
Reynolds, W. F.....Physics.
Ryland, H. H.....Physics, English.
Shepherd, T. R.....Metaphysics, Natural History, English, Chemistry.
Snider, M. F.....History, English.

Stoetzer, H. G.....English.
Stribling, T. Jr.....Physics.
Swan, L. L.....Metaphysics, Physics, Mathematics.
Turner, G. H.....Chemistry.
Waters, N. M.....History, Metaphysics, English, Natural History.
White, W. J.....History, English.
Wilson, T. M.....English, Chemistry, History.
Woodson, E. E.....Physics.
Yost, L. H.....Chemistry.
Yost, Z. F.....Metaphysics, Geology, Nat. Hist., Mathematics, Physics, Chemistry.

CERTIFICATES OF PROFICIENCY.

Armstrong, R. A.....Senior Mathematics.
Charles, J. E.,.....Agriculture.
Deahl, J. N.....Junior Mathematics.
Getzendaner, F. C...Agriculture.
Patterson, J. S.....Physiology and Hygiene.
Rector, T. G.....Agriculture.
Reed, J. M.....Anatomy, Physiology and Hygiene.
Robinson, G. P.....Agriculture.
Steuart, J. S.....Anatomy, Physiology and Hygiene.
Wilson, T. M..... " " " "
Yost, Z. F..... " " " "

CERTIFICATES OF PROMOTION.

Armstrong, R. A.....Intermediate Greek.
Berkeley, W. N., Jr..Junior Metaphysics.
Blair, R. S., Jr.....Jun. German, Jun. English, Jun. Mathematics.
Brown, J. E.....Jun. Mathematics, Jun. English.
Charles, J. E.....Jun. Metaphysics.
Corpenning, G. B...Jun. Mathematics, Jun. English.
Cox, E. W.....Jun. Mathematics.
Cox, J. D.....Junior French, Jun. Latin, Jun. Metaphysics.
Crawford, J. A.....Jun. English, Jun. Mathematics.
Cutlip, J. E.....Jun. Mathematics.
Dawson, R. W.....Jun. German.

Elliott, E. S.....Intermediate Latin and Greek, Jun. French.
Emmert, H. H.....Junior French, Intermediate Mathematics.
Finnell, C. N.....Jun. Latin, Greek, and English.
Getzendaner, F. C....Junior Mathematics, Jun. English.
Gregg, J. N.....Junior French, German, English and Mathematics.
Hartmeyer, C.....Junior Latin and Greek, Intermediate Mathematics.
Hackney, J. M.....Junior Mathematics.
Helmick, M. D.....Intermediate Latin and Greek, Jun. Metaphysics.
Henshaw, W. T.....Jun. German.
Hite, B. A.....Jun. Math.
Jemison, D. L.....Jun. Lat., Gr. & German, Inter. Math.
Lazzell, J. E.....Jun. Math.
Lindemuth, L. A.....Jun. English.
Mann, Edwin.....Jun. English.
Musgrave, E. C.....Jun. Math.
Ogden, H. C.....Jun. Metaphysics & French, Int. Lat. & Gr.
Reynolds, F. C.....Jun. Math.
Reynolds, W. F.....Jun. Math. & Latin.
Robinson, G. P.....Jun. French.
Ryland, H. H.....Jun. Lat. & Gr., Inter. Math.
Shepherd, T. R.....Jun. German.
Snider, F.....Inter. Lat., Greek and Math.
Stoetzer, H. G.....Jun. Math.
Stribling, T., Jr.....Jun. English and Math.
Swan, Leroy.....Jun. French.
Thompson, J. P.....Jun. Math and English.
Turner, G. W.....Jun. English, Inter. Math.
Van Gilder, G. E.....Jun. German.
Waters, N. M.....Jun. German.
White, W. J.....Inter. Math., Jun. Lat. and Greek.
Wilson, T. M.....Inter. Latin.
Woodson, E. E.....Jun. Math. and English.

SCOPE AND WORK OF THE UNIVERSITY.

The University includes in its organization a Preparatory Department, an Academic Department, a Law Department, a preparatory course in Medicine, and a Military Department.

REQUISITES FOR ADMISSION.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Applicants for admission to the Preparatory Department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic.

IV. Those wishing to enter the Academic Department must stand a satisfactory examination on the foregoing list of studies, and also such studies of the Preparatory Department as are related to the academic schools they desire to enter.

V. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VI. All Students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally."

PREPARATORY DEPARTMENT.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. This department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity of this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of collegiate study proper, or shutting out from the advantages of the Institution many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or, if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University. Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the Principal of the school, to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

THE COURSE OF STUDY

In the Preparatory Department aims to prepare young men for admission to the higher classes in the University, and to fit those who do not desire to take the full course for the business of life.

Candidates for entrance should be at least fifteen years old, and should have *thoroughly* accomplished the ordinary course of study in the common schools of the State.

JUNIOR YEAR.

FIRST TERM.

Arithmetic—Stoddard's Complete.....5 hours a week.
English Grammar—(Swinton) Etymology.....5 hours a week.
Latin (commenced).....5 hours a week.
Book-keeping .....3 hours a week.

SECOND TERM.

Book-keeping (one half term).....3 hours a week.
Arithmetic.....5 hours a week.
English Grammar—Syntax and Eng. Comp....5 hours a week.
Latin–Grammar and Reader. Chase and Stuart..5 hours a week.
Algebra—Robinson's Elementary (commenced) 5 hours a week.

THIRD TERM.

Algebra--Robinson's Elementary (completed)..5 hours a week.
Eng. Grammar—Anal., Pros. and Eng. Comp...5 hours a week.
Latin—Grammar and Readers.....5 hours a week.
Arithmetic.....5 hours a week.

SENIOR YEAR.

FIRST TERM.

Algebra—Robinson's University.....5 hours a week.
Cæsar (two books)—Latin Grammar.....5 hours a week.
Greek—Grammar and Reader. (Goodwin)....5 hours a week.
Geometry—Robinson's.....5 hours a week.
English Composition—(Hart). Essays.....1 hour a week.

SECOND TERM.

Algebra (continued).....3 hours a week.
Cicero's Orations (three orations)—Chase and Stuart's Grammar.....5 hours a week.

Greek—Grammar and Reader.....5 hours a week.
Geometry (continued).....5 hours a week.
English Composition and Essays (continued)... 1 hour a week.

THIRD TERM.

Algebra (completed)... .....5 hours a week.
Geometry (completed) .....5 hours a week.
Virgil—Three books of Æneid; Latin Grammar .5 hours a aweek.
Xenophon's Anabasis (two books). Greek Grammar .....5 hours a week.
English Composition and Essays (continued)....1 hour a week.

APPROVED HIGH SCHOOLS.

In order to secure the higher usefulness of the West Virginia University to the young men of the State, as well as to encourage the establishment of high schools and academies in the various sections and counties thereof, the Faculty of the University have adopted the following plan which they submit for the consideration of those interested in the work of higher education in this State.

It is confidently believed that this scheme, if generally encouraged, will, in a few years, result in the establishment of good preparatory schools and academies in various parts of the State, where not only many of those who will go to the University may get their preparatory training at less expense, but also many teachers in the primary schools will be enabled to get that additional knowledge and training so necessary to the successful prosecution of the work of primary teaching. Thus the whole public school system may be elevated and sustained on a higher plane, and the expenditure for public school instruction made productive of better results than can be attained under existing circumstances. The plan is as follows:

Any high school, graded school or academy may be approved by the West Virginia University as a preparatory school by complying with the following conditions:

1st. By establishing, in addition to the usual primary and grammar grades, a course of study the same as that pursued in the Preparatory department of the University, or its equivalent, under the instruction of competent teachers.

2d. By making application to the Faculty of the University for a visiting committee to examine the methods and work of such school for the purpose of ascertaining the character of the instruction given.

3d. Upon such application a committee of the Faculty, not exceeding two in number, will be appointed to visit such school, and upon a favorable report from such committee the Faculty will approve such school as a preparatory school for a term of four years. The expenses of the committee will be paid, one half by the University, the other half by the school making application.

4th. This approval will entitle the students who complete the prescribed preparatory course of study in such school, to enter the collegiate department of the University without examination, upon the certificate of the Principal of such school that such students have, within the fifteen months next preceding their coming to the University, completed the course and passed an examination thereon with a standing of 7 in a scale of 10.

5th. The Faculty reserve the right to withdraw such approval if, after the admission of students, the character of the work done at such school shall be found to be below the standard required for admission to the University classes, or if certificates are given to students who, having been found deficient after their admission, can not pass a fair test examination on the prescribed course of preparatory studies.

6th. At the expiration of the term of 4 years, the approval may be renewed, upon application, if the work previously done has been satisfactory.

A list of schools approved by the University will be published from time to time in the annual catalogue.

The co-operation of those interested in the work of higher education, who believe in building up our own institutions, is earnestly solicited in developing and encouraging this scheme.

The following schools have been approved under this plan:

Linsly Institute, Wheeling: Parkersburg High School (except Greek): Western Pennsylvania Classical and Scientific Institute, Mount Pleasant, Pa.

THE ACADEMIC OR COLLEGIATE DEPARTMENT.

The course of study in this department is distributed into nine independent schools. The object of this distribution is to allow greater freedom in the selection of studies and to elevate the standard of instruction and attainment.

But while the course is elective, the Faculty will advise students as to the choice of their studies, and always encourage a complete and regular course.

Each student in the Academic Schools is required to attend at least sixteen, and not more than twenty-one recitations per week, and to adhere throughout the session to the studies selected on his matriculation, unless the Faculty, for cause shown, allow him to attend a less or greater number, or to make an exchange.

Students will be classed in the several schools according to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

The advantages to the student, of the elective system, are that he may pursue the studies of any school for which he is prepared, without regard to his deficiency in other studies; that the time required for completing the course for a degree depends upon his ability and diligence; that if he is able or desires to take but a partial course, he may adapt that course to his tastes or his necessities in life; and that he is put upon a footing of social equality with his fellows, and thrown upon his individual efforts for success and distinction in academic study.

The Academic Schools are as follows:

I. Rhetoric.

II. Metaphysics.

III. Ancient Languages.

IV. Modern Languages.

V. Geology and Natural History.

VI. History.

VII. Mathematics.

VIII. Agriculture, Chemistry and Physics.

IX. English.

The details of the course of study in the several schools, with the length of time required to complete the same, are stated in the Announcements of the Professors on pages 48–56.

EXAMINATIONS.

Written examinations are held in each school at the close of each term, and at such other times as each professor may deem necessary.

No student will be excused for non-attendance at examinations, except upon presentation of a reason which may be considered valid by the Faculty.

Any student whose term marks for any term average 8.5 on a scale of 10, who is absent, for some unavoidable cause, from the regular examination held at the close of such term, may be excused from passing such examination—*provided*, that the Faculty will first determine whether the cause for absence is sufficient; and provided further, that such exemption from examination will not be allowed for more than one term in any academic year. In cases of this kind, the examination mark for the term missed will be the average of the examination marks of the other two terms of the academic year.

DIPLOMAS AND CERTIFICATES.

I. A CERTIFICATE OF PROMOTION will be given to each student who attains a standing of 7 on a scale of 10 for one year's continuous study in Junior or Intermediate classes.

II. A CERTIFICATE OF PROFICIENCY will be awarded for satisfactory attainments in the entire studies of any school, or completed subject therein.

III. A DIPLOMA will be conferred on each student who attains a standing of 7 on a scale of 10 during the entire course in any of following subjects: Latin, Greek, French, German, Chemistry, Physics, Geology, Natural History, Analytical Chemistry.

IV. A DIPLOMA will be granted to each student who completes the entire course in any academic school with a standing of 7 on a scale of 10 in the Senior class or classes thereof.

V. No student will be awarded a diploma or degree, who is deficient in English elementary studies.

In ascertaining a student's standing in his classes, examination marks count one-half and recitation marks one-half, and the time allowed each examination shall not be less than two hours, and may be as much more as the Professor in charge may deem sufficient.

DEGREES.

The Academic Degrees are the following:

Bachelor of Sciences, B. S.

Master of Sciences, M. S.

Bachelor of Arts, A. B.

Master of Arts, A. M.

Bachelor of Laws, B. L.

REQUIREMENTS FOR DEGREES.

The Degree of Bachelor of Sciences requires: *Certificate of Promotion* in Preparatory Latin; *Diplomas* in the schools of Metaphysics; Rhetoric; Modern Languages; English; Geology and Natural History; Agriculture, Chemistry and Physics; Mathematics; *Certificate of Proficiency* in Physiology and Hygiene.

Latin or Greek in the academic department may take the place of one of the Modern Languages; History or Constitutional and International Law the place of senior English.

The Degree of Master of Sciences requires: *Certificate of Promotion* in Preparatory Latin; *Diplomas* in the schools of Metaphysics: Rhetoric; History; Modern Languages; English; Geology and Natural History; Agriculture, General and Analytical Chemistry, and Physics; Mathematics; and *Certificate of Proficiency* in Anatomy, Physiology and Hygiene.

The Degree of Bachelor of Arts requires: *Diplomas* in the schools of Rhetoric; Metaphysics; Ancient Languages; English; History; and *Diplomas* in Geology or Natural History; Chemistry or Physics; *Certificate of Promotion* in Junior Mathematics; *Certificate of Proficiency* in Physiology and Hygiene.

Chemistry or Physics may take the place of History.

Certificate of Promotion in a Modern Language may take the place of senior Latin or senior Greek.

A *Diploma* in French or German may take the place of Senior Latin and Senior Greek.

The Degree of Master of Arts requires: *Diplomas* from all the Academic schools, also *Certificates of Proficiency* in Constitutional and International Law, and Physiology and Hygiene. A satisfactory general examination on all subjects studied will be required of students for this Degree.

Candidates for any of the foregoing degrees must submit to the Faculty a suitable essay or oration to be delivered, if required, on Commencement day.

The Degrees of Master of Arts and Master of Sciences are not conferred *in course.*

ANNOUNCEMENTS

OF THE

INDIVIDUAL PROFESSORS

IN THE ACADEMIC DEPARTMENT.

SCHOOL OF RHETORIC.

PRESIDENT TURNER.

The course of study in this school requires two years, the *Junior* and *Senior*.

All students desiring to enter this school must have completed the preparatory course in English composition, or stand a satisfactory examination thereon.

In the *Junior* year, instruction will be given by text book and lectures upon Style, including Versification, and the various forms of literary composition; Practical work will also be required, both class-room exercises, and original essays.

In the *Senior* year, instruction in the Principles of Rhetoric as founded on Psychology and Logic will be given, and essays of a more elaborate character will be required.

In order to a thorough mastery of the topics of the senior year, students wishing to enter this year must have completed the Junior studies in the school of Metaphysics.

A part of each year will be devoted to lectures and practical work in Elocution.

All non-professional students are required to enter this school, if prepared for it, upon matriculation.

Each class will recite once a week. For more thorough drill, the Junior class will, if necessary, be divided.

Text Books.—For Junior class, Hart's Rhetoric; For Senior class, Day's Art of Discourse; Elocution—McIlvaine.

SCHOOL OF METAPHYSICS.

PROF. PURINTON.

The course of study embraces Psychology, Logic, Ethics, Natural Theology, and Evidences of Christianity, requiring two years for its completion.

Instruction is given by means of text book recitations, lectures and parallel readings.

Wherever conflicting theories are encountered, the various arguments and their necessary tendencies are presented to the student, and he is encouraged to investigate and judge for himself.

Junior Year—Psychology and Logic.

Text Books and Books of Reference:

Porter's Intellectual Science, Baine's Mental Science, Bascom's Psychology, McCosh's Intuitions, Hamilton's Lectures, Upham's Mental Philosophy, Edwards on the Will, Jevons-Hill's Logic, Mill's, Hamilton's, Coppee's, Atwater's and De Morgan's Logic.

Senior Year—Ethics, Natural Theology and Evidences of Christianity

The text book in Ethics, is Janet's Elements of Morals, with reference to the works of Wayland, Baine, Hopkins, Hickok, Dymond and Winslow.

In Natural Theology and Evidences of Christianity, no text book is used. A full course of lectures on Christian Theism is given; which are designed to cover the ground usually taken by text books on these subjects. Frequent reference is made to the best authors, ancient and modern.

SCHOOL OF ANCIENT LANGUAGES.

PROF. BERKELEY.

The subjects taught in this school are:

I. The Latin Language and Literature, in which there are three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used:

1. *Junior Class*—Virgil's Bucolics and Georgics; Horace's Odes and Epodes; Cicero de Senectute and de Amicitia, and Latin Prose Composition and Grammar.

2. *Intermediate Class*—Horace's Satires and Epistles, Livy, Cicero de Officiis, Latin Prose Composition and Grammar, and Bender's Roman Literature.

3. *Senior Class*—Germania, Agricola and Annals of Tacitus, and Exercises in Latin Composition. In this class a private course of parallel reading is prescribed.

Lexicons Recommended for Each Class—White's, Andrews', or Freund's Leverett's.

II. The Greek Language and Literature, in which there are also three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text Books used:

1. *Junior Class*—Herodotus, Homer's Iliad and Odyssey, Greek Prose Composition and Goodwin's Grammar.

2. *Intermediate Class*—Xenophon's Memorabilia, Plato's Apology and Crito, Euripides, Greek Prose Composition, Goodwin's Grammar, and Jebb's Greek Literature.

3. *Senior Class*—Demosthenes, Sophocles, and Exercises in Greek Composition. A private course of parallel reading is also prescribed for this class.

Lexicon for Each Class—Liddell and Scott's—the abridged edition for the Junior class —the unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin and Greek according to the so-called continental method.

The Junior and Intermediate classes recite three times a week, and the Senior twice a week.

SCHOOL OF MODERN LANGUAGES.

PROF. HARVEY.

In this School are taught French and German. In each Language there are two classes, Junior and Senior. The Junior classes are thoroughly drilled in the Etymological forms, and are practiced in the simpler forms of Syntax. The aim in the Senior classes is to give facility and accuracy in translation. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the Senior classes. Junior classes meet five times a week. Senior classes meet two or three times a week.

Fair knowledge of English and Latin is required for admission to the lower classes. No Certificate or Diploma will be given any one who is not prepared to enter the Schools of English and Latin.

Text Books:

Junior French—Whitney's French Grammar; Smith's Reader; Colomba, Picciola, or selections from modern authors.

Senior French—Guizot's William the Conqueror, Corneille's Cid, Racine's Athalie, Moliere's Misanthrope, Hugo's Ruy Blas. Brachet's Grammar and Saintbury's Literature.

Junior German—Meisner's German Grammar, Grimm's Maerchen, Schiller's Jungfrau or Wilhelm Tell, or selections from modern authors.

Senior German—Goethe's Iphigenia, Fouque's Undine, Goethe's Hermann and Dorothea, Lessing's Nathan Der Weise, Whitney's Grammar and Conant's Literature.

Reference Books:

French—Spiers and Surenne's, Gase's or Masson's Dictionary; Brachet's Historical or Wall's Student's Grammar, Van Laun's or Saintbury's Literature.

German—Adler's, Whitney's or Longman's Dictionary, Becker's or Brandt's Grammar, Hosmer's or Harrison and Gostwick's Literature.

SCHOOL OF GEOLOGY AND NATURAL HISTORY.

PROF. WHITE.

This school includes Botany, Zoology, and Geology, and requires two years for the completion of the course.

FIRST YEAR.

During the first year Botany and Zoology will be studied, and instruction in each will be given thrice every week of the Winter and Spring Terms. In addition to a full theoretical knowledge of these subjects, a stated amount of practical work in analyzing and classifying plants, and in dissecting and skeletonizing animals will be required during the Spring term.

Text Book.

Botany—Gray; Sach's and Bessey's for reference.

Zoology—Orton, and Romane's; for reference, the works of Darwin, Wallace, Mivart and others.

SECOND YEAR.

Geology will form the subject of study during this year, and instruction in it will be given three times a week from the beginning of the Winter Term until about the 1st of May. After this an excursion will be made through West Virginia and adjoining states, for the purpose of acquiring a knowledge of Practical Geology, the tracing and identification of minerals, the construction of sections, etc. This excursion (the necessary expenses of which shall never exceed twenty-five dollars) is open to all who pursue the study of Geology, buf is required only of those who expect to graduate in the Scientific Department of the University, or to obtain the Diploma of this school.

Text Book:

Leconte's Elements of Geology. For reference, Dana's Manual, Lyell's Principles, and Geike's Text Book.

For Diploma in Natural History, two terms in Botany and two in Geology are required; but Geology without the excursion will be permitted as a substitute for structural Botany.

For Diploma in Geolgy, one term in Botany, two in Zoology, and two in Geology with an excursion of one week, will be required.

SCHOOL OF HISTORY AND CIVICS.

PROF. WILLEY.

History is the study of a lifetime. It can not be completed in a university course, nor can it be excluded. Every student aspiring to a liberal education must know History, whatever be his vocation in life. But the most that can be attempted in a college course is to lay a good foundation.

The course of instruction is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but also the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study runs through four terms, giving one term to the divisions of Ancient, Mediæval and Modern History, respectively, and one full term to United States History. The text-books are Myers' Ancient, Mediæval and Modern Histories; with *reference* to Ridpath's Encyclopedia of Universal History, Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays (first and third series), Arnold's Lectures on Modern History, Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

A course of lectures is given during the third term, on "Civics"; tracing the history of governments from primitive times through successive stages of development down to the present day, and explaining in detail the govermental machinery of modern towns, counties, cities, states and nations.

SCHOOL OF MATHEMATICS.

LIEUT. J. L. WILSON, U. S. A.

The School of Mathematics includes studies in Pure and Applied Mathematics, as follows: Trigonometry (Plane and Spherical), Mensuration, Surveying, Navigation, Analytical Geometry, Differential and Integral Calculus, Analytical Mechanics and Astronomy.

The course of instruction consists of three years:

Junior Year—Trigonometry, Mensuration, Surveying, Navigation and Analytical Geometry.

Intermediate Year—Descriptive Geometry. Differential and Integral Calculus.

Senior Year—Analytical Mechanics, Astronomy.

Instruction is given by means of lectures, class exercises, and original work by the student. Original problems and practical exercises are required in Trigonometry, Mensuration, Surveying Topography and Astronomy.

Such useful instruments as the Compass, Transit, Sextant and Telescope are available, and ample opportunity is given for becoming acquainted with their proper manipulation and practical use.

Students are required to pass an examination in University Algebra and in Geometry, in order to enter the Junior year in this school.

SCHOOL OF AGRICULTURE, CHEMISTRY AND PHYSICS.

PROF. A. R. WHITEHILL.

Instruction in the several departments of this school is by text books, lectures and experiments. The courses in Physics and General and Analytical Chemisty are continued throughout the year; the course in Agriculture is completed at the end of the Winter Term.

In *Agriculture*, the attention of the class is directed to following subjects: The organic and inorganic food of plants, their germination, development and accompanying physical changes; the chemistry and physics of soils, their origin, formation, classification, exhaustion and relation to vegetable nutrition; drainage, irrigation, subsoiling, manures, grain and forage crops, the care and mangement of stock, etc.

The new edition of Emerson and Flint's Manual of Agriculture and Wyatt's treatise on Soils, Plants and Manures are used as text books, and the subject matter is illustrated, as far as possible, by experiments in the laboratory.

In *Physics*, as a necessary preparation for after study, attention is called to a few of the leading principles of Mechanics, and these are illustrated by experiments so far as the limited supply of mechanical apparatus will permit. Afterwards the subjects of Sound, Heat, Light, Electricity and Magnetism are studied in turn, and the modern doctrines of Molecular Physics are explained.

Arnott's Physics and Avery's Natural Philosophy are used as text books, and the works of Deschanel, Ganot and other well known authors are in the laboratory, as books of reference.

In *Chemistry*, the subjects presented are the distinctive features of the study, the laws of cheminal combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, allusion is made to the applications of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account. Students in this branch have access to a

well equipped laboratory, and the recitations and lectures are fully illustrated by tests and experiments.

The class recites four times a week.

In *Analytical Chemistry*, facilities are provided for systematic instruction in qualitative analysis, and for general practice in experimental work. Members of the class are supplied with the necessary apparatus and chemicals,and are required to spend from one two hours daily in the laboratory. The course includes the preparation of some of the more important gases and salts, and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are, from time to time, given to test the progress of the student in his work. During the Spring Term special attention is directed to some of the more important medical preparations and to the analysis of waters; and an elemetary course in quantitative work is added.

Students who have completed the course in General Chemistry in the University are admitted to this class without examination. All other applicants will be required to pass an examination on the matter contained in any elementary work on the subject named.

SCHOOL OF ENGLISH.

PROF. REYNOLDS.

The course in this school includes the subjects named below, and is arranged for two years, as follows:

JUNIOR CLASS.

Exercises in Phonetic, Verbal, Syntactical and Logical Analysis of the English Language: History of English Literature; First Principles of Political Economy.

SENIOR CLASS.

English Philology, or the Constituents and derivation of the English Language; Principles of Literary Criticism; Study of representative authors in different departments of English Literature; discussion of leading practical questions in Political Economy and Social Science.

Instruction is given by text-books, lectures, exercises and reference to good authorities.

Students entering the Junior Class must have a certificate of promotion in the English branches taught in the Preparatory Department of the University, or give evidence having taken an equivalent course elsewhere.

Students entering the Senior Class must have a certificate of promotion in the Junior Class in this School, and also in the Junior Class in the School of Rhetoric, or must stand a satisfactory examination in the subjects taught in those classes.

LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of Law in any part of the United States.

It aims to make not merely *theoretical*, but *practical* lawyers, who will go from the lecture room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Law is conferred upon graduates in this department. By recent act of the Legislature graduates are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statute Law, Constitutional and International Law, Criminal Law, Maritime Law, Mercantile Law, Equity Jurisprudence, Evidence, Pleading and Practice.

COMMON AND STATUTE LAW, &c.

PROF. ST. GEORGE T. BROOKE.

The Text Books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, 1st Greenleaf on Evidence; and for *reference* the Code of West Virginia, and subsequent Acts of the West Virginia Legislature.

The text books will be supplemented by lectures each week, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law, as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text books used in Constitutional Law will be the "Federalist." This, however, will be supplemented by lectures upon our Constitutional History from the Colonial

period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States in Interpreting its provisions will also be the subject of lectures.

The text book used in International Law will be Woolsey's Introduction to the Study of International Law.

EQUITY JURISPRUDENCE, MERCANTILE LAW, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text books are Adams' Equity aud Smith's Mercantile Law, with *reference* to Parsons and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisdiction.

Some special heads of Equity Jurisprudence;

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the law relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent: the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, &c; Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

TERMS AND TOPICS.

Three terms constitute the school year, and the entire course of instruction is covered by the lectures within the year, thus enabling the student to complete the course and become a candidate for graduation at the end of that period. A majority of the students do so; but it is optional with the student to give one year or two to the course. This must be determined by the degree of culture and the qualifications of the student when commencing the course. Many students prefer to take two or three branches of study in the academic departments in connecton with their law studies and divide the law course into two years, which is always advisable if the student is deficient in general culture.

As one term is not much dependent upon another as respects many of the topics, a

student may enter at the beginning of either term, but it is always advisable to enter at the beginning of the Fall Term if possible.

The work of the year is divided among the three terms as follows:

FALL TERM.

International Law. Rights of Persons and Things—Blackstone. Common Law Pleading.	PROF. BROOKE.
Equity Pleading. Contracts. Negotiable Instruments.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. Evidence. Blackstone, 1st and 2d Books (continued). Blackstone, 3d and 4th Books (begun).	PROF. BROOKE.
Agency. Partnership. Suretyship and Guaranty. Domestic Relations. Equity—Accident, Mistake, Frauds, &c.	PROF. WILLEY.

SPRING TERM.

Constitutional Law (continued). Criminal Law, &c.—Blackstone, 3d and 4th Books (continued). Real Property.	PROF. BROOKE.
Bailments. Corporations. Insurance. Equity—Trusts, Wills, &c.	PROF. WILLEY.

In addition to the regular lectures of course, members of the local Bar occasionally favor the school with lectures on topics of special interest.

METHODS OF INSTRUCTION.

The methods of instruction consist of Lectures and Examinations from approved text books read in course; the drawing of the various legal papers requisite in the ordinary practice of the law; and Moot Courts.

Each day before the lecture, there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the text book as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation, a review examination on the entire course. They will all be in writing.

MOOT COURTS.

However familiar the student may be with the text books and with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The moot court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these they are taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleadings, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the arguments, charge, verdict, motion in arrest of judgment, writ of error, &c. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the bar as gentlemen as well as lawyers.

REQUIREMENTS FOR ADMISSION AND DEGREES.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures.

If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and have made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

In September of each year an examination in the ordinary English branches will be held by the two law Professors and the President of the University of all students who are candidates for the degree of Bachelor of Laws during that year. Any student found deficient at this examination will be required to pursue those branches in the classes of the University, in connection with his law studies. The examination will include the correct writing of ordinary English.

The degree of Bachelor of Laws will be conferred only upon those who are able to pass a rigid examination upon the entire course. The value of a diploma from this department will never be impaired by conferring it where it is not merited and has not been fairly won.

No Degree will be conferred on any student who has not been in attendance upon the lectures for at least nine months.

EXPENSES.

The tuition fee in the Law Department is $8.00 per term.

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

A summary of the expenses for boarding, &c., as given on a succeeding page of this Catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering any of the departments.

The text books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

ADVANTAGES OF A UNIVERSITY LAW COURSE.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law Schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential to the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the Profession of Law, the advantages of a University course can scarcely be overestimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course; the active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining; and it produces

habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected miscellaneous library, and the valuable drill of the Literary Societies.

Any information relative to this department will be cheerfully given in reply to inquiries.

Bachelors of Law.

Students who have received the Degree of Bachelor of Laws:

1883—Frank Cox.....Morgantown.
1883—S. A. Hays.....Gilmor county.
1883—Melville Peck.....Barbour county.
1883—William Rich.....Monongalia county.
1883—John W. Wiltshire.....Jefferson county.
1884—William T. Bland.....Weston.
1884—Meigs Bland.....Weston.
1884—J. F. Corke.....Harrison county.
1884—I. G. Lazzell.....Monongalia county.
1884—B. S. Morgan.....Monongalia county.
1885—William R. Thompson.....Hinton.
1885—Frank T. Haymond.....Morgantown.
1885—Waitman T. Houston.....Morgantown.
1885—E. W. Bedinger.....Charlestown.
1885—Samuel C. Kelley.....Morgantown.
1885—Arthur L. Cox.....Marion county.
1885—L. C. Tabb.....Jefferson county.
1885—H. J. Sturgis.....Smithfield, Pa.
1885—F. Lively.....Summers county.
1885—James H. Stewart.....Putnam county.
1885—W. S. Stuart.....Doddridge county.
1885—B. L. Keenan.....Monongalia county.
1885—R. E. McKinley.....Latrobe, Pa.
1886—Geo. C. Baker.....Morgantown.
1886—Geo. E. Boyd, Jr.....Wheeling.
1886—L. M. Boyers.....Monongalia county.
1886—C. B. Dille.....Morgantown.
1886—R. E. Fast.....Morgantown.
1886—S. M. Musgrove.....Marion county.
1886—H. L. Robinson.....Uniontown, Pa.

CLASS OF 1887.

The following students constitute the Class of 1887, and will be examined for the degree when they shall have completed the course :

W. H. Baker.....Morgantown.

R. E. L. Blackwood.....Kanawha county.

W. H. Curtis.....Ohio county.

R. W. Dawson.....Morgantown.

A. Dupuy.....Morgantown.

E. S. Elliott.....Kingwood.

L. H. Keenan.....Monongalia county.

J. W. Lowe.....Harrison county.

H. N. Martin.....Cabell county.

H. C. May.....Lincoln county.

J. M. McGrath.....Greenbrier county.

J.W. McCay.....Tyler county.

A. L. Romine.....Harrison county.

E. P. Rucker.....Greenbrier county.

J. W. Smith.....Monongalia county.

M. F. Snider.....Doddridge county.

J. L. Walls.....Preston county.

THE MEDICAL DEPARTMENT.

The Medical Department of the University does not possess the equipments and advantages of the older Medical Schools of the country, but is presided over by a practical Physician of ability and experience; and it is believed that with the instruction in Anatomy, Physiology and Hygiene, together with ample practice in the dissecting room, and with the Schools of Chemistry and Botany, unsurpassed opportunities are offered for the preliminary instruction of medical students, as well as for the education of unprofessional students in essential branches of this department. In any vocation of life which he may enter, nothing is likely to prove so calamitous to the future career of a student as ignorance of the laws of health. However high and promising his mental discipline and attainments may be, if he is ignorant of the constitution and laws of his physical organism, observation proves that his success and usefulness will be impaired, and the chances are that he will be cut down in the prime of life by the hand of disease. It is these considerations which render this department of the University a most essential adjunct in the education of every student, whether he is seeking to prepare himself for the medical profession or not.

ANNOUNCEMENT OF THE PROFESSOR IN THE SCHOOL OF ANATOMY, PHYSIOLOGY AND HYGIENE.

PROF. BROCK.

A knowledge of Anatomy and Physiology, minute and exact, is the recognized basis of medical science; an understanding of its broad and general principles has come to form an essential part of a liberal education. To make these studies practical and plain, thorough and comprehensive, inspiring and instructive, is the aim of this department of the University.

The class is composed as follows:

First—Of those who will pursue their medical studies and become practitioners of medicine.

Secondly—Of those who will enter the profession of Dentistry.

Thirdly—Candidates for graduation in the Collegiate Department, who are required to take one term in Physiology in course.

The Fall and Winter terms are devoted especially to the needs of those who compose the first two divisions.

During the Spring term Anatomy and Physiology are taught in a more general way, with special reference to their Hygienic applications.

MILITARY DEPARTMENT.

LIEUT. JAS. L. WILSON, FOURTH U. S. ARTILLERY.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the regent of said district, who receive tuition, books and stationery free; but not more than five can be appointed from any one county. Books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them evidence of good moral character.

The following table will show the counties composing the several districts; the the names of the Regents are prefixed to this Catalogue:

District	I.	Hancock, Brooke, Ohio.
District	II.	Marshall, Wetzel, Marion.
District	III.	Ritchie, Doddridge, Harrison, Gilmer, Calhoun.
District	IV.	Tyler, Pleasants, Wood, Wirt.
District	V.	Mason, Jackson, Roane.
District	VI.	Putnam, Cabell, Wayne.
District	VII.	Lincoln, Boone, Logan, Wyoming, McDowell, Mercer, Raleigh.
District	VIII.	Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District	IX.	Kanawha, Clay, Nicholas, Braxton, Webster.
District	X.	Lewis, Randolph, Upshur, Barbour, Taylor, Tucker.
District	IX.	Preston, Monongalia.
District	XII.	Hampshire. Hardy, Grant, Mineral, Pendleton.
District	XIII.	Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause. Drill occupies one hour on each of four days in the week. A neat uni-

form of cadet gray is worn, including a fatigue suit, which may be worn constantly, and is as economical as ordinary citizens' dress. Cadets may keep this in view in bringing clothes with them. Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term. The university has an ample equipment for both infantry and artillery, and is supplied with ammunition by the State.

The annual course in drill for the corps is as follows:

FIRST TERM—*Infantry.*—Schools of the Soldier Company and Battalion, including Bayonet Exercise, Skirmish Drill and Target Practice.

SECOND TERM—*Artillery.*—Manual of the Piece, Manual of the Saber, and Saber exercise.

THIRD TERM—*Infantry and Artillery.*—Company, Battalion and Skirmish Drills, School of the Battery Dismounted, Guard Duty, Target Practice.

Dress Parades, Reviews, Inspections and Guard Mountings are held at least once a week, except during the Winter term.

Lectures on military subjects, including Customs of Service, Organization of Armies, Strategy and Grand Tactics, Military Campaigns, Military Engineering, Heavy Ordnance, Explosive Compounds, Torpedoes, &c., delivered during the year to the members of the corps.

GENERAL REMARKS.

LOCATION.

The West Virginia University is located at Morgantown. Its buildings are ample, eligibly situated, and admirably adapted for their purposes. They are immediately outside of the borough, on the right bank of the Monongahela river, and command a wide prospect of exceedingly attractive and picturesque scenery. Morgantown is reached by the Baltimore and Ohio Railroad's branch line from Fairmont, and also by coaches daily from Fairchance, Pa. Steamboats from Pittsburgh arrive every day at Geneva, twelve miles below Morgantown, and, under appropriations from Congress, the slackwater navigation of the river will soon extend to Morgantown.

ORIGIN.

The University is the outgrowth of the "West Virginia Agricultural College," established in 1867, with the proceeds of the State's share of the land granted by Congress in aid of agricultural and industrial education in the States. This fund, increased by subsequent appropriations by the State, now amounts to about $107,000, and constitutes the permanent endowment of the institution. There are annual appropriations for current and contingent expenses. The citizens of Morgantown, with generous appreciation of educational advantages, contributed in grounds, buildings and money, about $50,000.

ENTRANCE EXAMINATIONS.

All new students are expected to be present on the day preceding the opening of the Fall term, being for this year September 7, in order to be examined on the studies required for admission, and on those required for admission to the particular schools they desire to enter. They should report at the President's room at the University not later than nine o'clock, A. M., on September 7th, and be by him directed to the examiners in the various branches.

DIRECTIONS FOR NEW STUDENTS.

Students who have not before attended the University should, on arriving, report themselves to the President, who will assist them in procuring rooms, and give them directions as to payment of contingent fees, matriculation, enrollment and selection of their studies.

TUITION.

Tuition is free to all students from this State over fifteen years of age, in the several departments of the University, except in the Schools of Law and Medicine: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, have free tuition, and all others are charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States are charged $12.50 per term for tuition in the University Department, and $5 per term in the Preparatory Department.

Tuition in the Law Department.....	$ 8 00 per term.
Tuition in the Medical Department.....	10 00 per year.
Contingent Fee in all Departments.....	2 00 per term

Students in Analytical Chemistry will be charged a fee of $20 per

year to cover the use of material and wear and tear of apparatus in their hands.

There will be no variations nor dednctions from these rates for any cause whatever, except protracted illness.

Ministerial students are admitted free, upon proper testimonials.

ROOMS AND BOARDING.

Students rent rooms in private houses in the town, there being as yet no dormitories on the University grounds. Room rent ranges from 75 cents $1,25 per week, everything furnished except lights and towels.

Boarding is furnished either by private families at a stated price per week, or more generally by the system of club boarding.

A number of students form a club, and employ some person to cook for them and furnish room and table ware. One of the club acts as caterer and buys the supplies, of which an account is kept and the actual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.70 to $2.00 per week. Board in private families costs $2.00 to $2.50 per week.

Washing costs from $1.00 to $1.50 per month.

EXPENSES.

The expenses of a student vary according to his habits. The *necessary* expenses of a student at the University are estimated according to the following table, excluding clothing and traveling expenses, for the University year of forty-one weeks:

Room rent	from	$31 00	to	$ 52 00
Boarding	"	70 00	to	103 00
Washing	"	11 00	to	16 00
Lights and Incidentals	"	20 00	to	20 00
Text Books (average)	"	10 00	to	10 00
Total		$142 00		$201 00

To this must be added the tuition fees of those students who are required to pay tuition.

Parents and guardians are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

DISCIPLINE.

Discipline is directed to the development of manliness and self-respect among the students. They are expected to be gentlemanly in their conduct and correct in their habits, and to deport themselves in all places as reputable and honorable citizens. No young man will be allowed to retain his connection with the University who persists in habits of dissipation or other disreputable conduct.

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises. A report is sent at the beginning of each term to parents or guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, or if he shall absent himself from recitation or morning roll call more than twice in any month, without good cause, the parent or guardian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is especially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his class-mates that he be punctual in his place from the first day of the term till the last. No excuse will be accepted for

absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with his studies.

RELIGIOUS INSTRUCTION AND WORSHIP.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all the students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutious of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject:

"*Resolved*, That each student will be required to attend on Sabbath the public religious service of his choice, or, if he is a minor, as his parent or guardian may direct; but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

PRIZES.

The Regents' Prizes.—To the student who shall write the best essay upon a given subject, $25.00. To the student who shall be adjudged the best declaimer, $15.00. These prizes to be awarded after public competition, by a committee of citizens appointed by the Faculty.

These were awarded at the last contest as follows,

Essay—R. W. Dawson.....$25 00
Declamation—E. W. Stifel..... 15 00

ENGLISH LITERATURE PRIZE.

A prize of $50 has been offered by the President of the University to the student who shall write the best essay on some

English author and pass the best examination on some assigned period of English literature. The subject for essay the present year is Milton. The examination will be on the Literature of the period from 1620 to 1700.

The conditions of the competition for this prize are as follows:

1. It is limited to students in the academic department.

2. Students intending to compete must give their names to the Professor of English not later than January 1st.

3. The essay must be handed to the Professor of English by May 15th. The examination will take place between May 15th and June 1st.

4. The committee to award the prize will consist of the President of the University, the Professor of English and some gentleman to be chosen by the contestants.

5. The average marks of essay and examination combined, will determine the competition.

6. The prize will not be given to the successful competitor unless the essay and examination are of a character to deserve it.

For the year 1887–8 the subject for essay will be Alexander Pope, and the examination will be on the literature of the period from 1675 to 1750.

In 1886 this prize was awarded to Mr. W. N. Berkeley, Jr.

PRIZE FOUNDATIONS.

The attention of those interested in the work of higher education, and especially in the work of the University, is respectfully called to the desirability of stimulating students to special excellence in some study, or in oratory, by offering prizes of money for competition. Citizens of our State who have the financial ability, could confer no more lasting benefit than by placing in the hands of the Board of Regents as a trust fund, a certain sum of money as a prize foundation, the interest of which shall be annually offered as a prize for special excellence in some department of study. Whatever excellence is attained by the work of the University will react upon the whole system of State education, and be a stimulus to ambitious and deserving youth throughout the State.

AID FOR INDIGENT STUDENTS.

Many young men of our State are struggling against many obstacles in obtaining an education, the chief of which is poverty. They are compelled to work during a vacation to obtain funds for the expenses of the next year. Some of them go out to teach during the winter term and return in the spring. If the authorities of the University had at their disposal a sum of money which could be devoted annually to the relief of deserving young men of this class, it would be of great benefit and would relieve these students from many anxieties which interfere with the successful prosecution of their studies. Those who have the means at their disposal and are inclined to assist this class of young men, might place in the hands of the Board of Regents a sum the interest of which should be annually applied to assisting indigent young men who show themselves worthy of help.

LIBRARY.

A respectable beginning towards a University Library has been made. About five thousand volumes have been carefully selected and placed on its shelves, including not only many choice and valuable books of reference, but also standard works in the various departments of History, Biography, Theology, Agriculture, Arts, Sciences and general Literature.

We respectfully request the friends of education to make contributions to its shelves.

A deposit of $2.00. or security from some professor or teacher, is required of all students who wish to avail themselves of the privileges of the Library. This is intended to secure the safe keeping and return of books borrowed.

The Library is open to students on Friday of each week and at such other times as the Librarian may find convenient.

READING ROOM.

Many of the journals of the State and valuable religious papers of some of the leading religious denominations are gratuitously sent to the reading room of the University. The leading period-

icals of this country and Europe are regularly subscribed for and placed upon its files.

MUSEUM.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specmens of animals. Such donations will be acknowledged and carefully labeled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

The vicinity of the University offers unrivaled advantages for the study of Practical Geology. Especial attention is paid to this branch.

Additional provision has recently been made for the study of Practical Geology by means of an annual excursion of four weeks with Prof. White through portions of West Virginia and of surrounding States.

DONATIONS TO THE MUSEUM.

Miss Nellie Silcott, Brownsville, Pa., per A. H. Tait, Esq., game bag of Chief Joseph, taken at his capture, photographs of Chief Joseph, Curley, Running Antelope, Sitting Bull, Sitting Bull's son, Snake and Big Belly, Young-man-afraid-of-his-Horses, Eagle Light.

Walter Hough, of the Smithsonian Institution, mummy dust and cloth.

Rev. W. R. White, DD., tooth of mastodon found near Point Pleasant, W. Va.

Hon. J. W. Hare, rattle from large rattlesnake killed in Cheat mountain.

R. W. Tapp, trapdoor spider and nest.

Commander F. E. Chadwick, U. S. N., death casts of heads of Frederick the Great, Napoleon, and Queen Louisa of Prussia.

By same, album of photographs from life of the Royal Families of England and Germany and many of the celebrated men of Europe.

LITERARY SOCIETIES.

There are two of these (the Parthenon and Columbian) in connection with the University, supplied with suitable halls, handsomely furnished, whose exercises in Composition, Reading, Oration, Debate and Criticism, are in many respects, of great advantage to the student. They also afford facilities for an acquaintance with parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during commencement week.

THE ALUMNI.

In order that a record of the graduates of the University may be accessible, it has been deemed expedient to publish, once every three years, in the Catalogue, a list of the graduates, with their occupations and post office addresses. The list now published may contain inaccuracies. Errors should be reported to the Secretary of the Faculty and to Mr. J. H. Hawthorne, class of 1877, at Kansas City, Missouri. Changes in post office addresses should also be so reported, as well as any other items necessary to make this list complete and accurate.

An Alumni Association has been formed, and graduates are cordially invited to be present at the annual meeting, which takes place on commencement day. A programme of exercises for the meeting this year has been arranged, embracing an oration, poem, &c.

All who have been students at the University are also invited to visit the institution at commencement or whenever it may be convenient for them.

ALUMNI RECORD.

Class.

1870. Dent, Marmaduke Herbert.....Lawyer.....Grafton, West Virginia.
1871. Dille, Oliver Hagans.....Farmer.....Morgantown, West Virginia.
1871. Joliffe, William Elza.....Farmer.....White Day, West Virginia.
1872. Drabelle, John Hershel.....Lawyer.....Des Moines, Iowa.
1872. McLane, Allen Elza.....Merchant.....Steubenville, Ohio.
1872. Smith, Benjamin Wells.....Lawyer.....Minneapolis, Minnesota.
1872. White, Israel C., Ph. D.....Professor of Geology. West Virginia University.
1873. Babb, Charles Montgomery....Farmer.....Greenland, West Virginia.
1873. Borden, Daniel Webster.....Physician.....Kearneysville, West Viginia.
1373. Boughner, William L.....Farmer.....Fairmont, West Virginia.
1873. Brown, James Frederick.....Lawyer.....Charleston, West Virginia.
1873. Bullock, Edmund Tanner.....Lawyer.....Parkersburg, West Virginia.
1873. Harris, John Thomas.....Stenographer.....Parkersburg, West Virginia.
1873. Lynch, George Preston.....Lawyer.....————————, Missouri.
1873. McClure, Taylor Bascom.....Teacher.
1873. Price, Thomas Hornor.....Physician.....Bridesburg, Pennsylvania.
1873. Pritchard, William Taylor.....Weston, West Virginia.
1873. Purinton, Daniel Boardman...Professor of Metaphysics and Vice President of West Virginia University.
1873. Temple, Marcellus Luther.....Lawyer.....Osceola, Iowa.
1873. Waters, James Talman,.....Lawyer.....Charleston, West Virginia.
1874. Chadwick, Richard Vincent....Deceased.

1874. Dean, John Shreve William ..Teacher.....Buckhannon, West Virginia.
1874. Howell, William Moss.....Clergyman.
1874. Jacobs. Thomas Perry.....Lawyer.....New Martinsville, West Va.
1874. Lynch, Charles Wesley.....Lawyer.....Clarksburg, West Virginia.
1874. Moran, Ellsworth Elza .....Clergyman.....Egypt, N. J.
1874. Woods, Frank.....Lawyer.....Grafton, West Virginia.
1875. Adams, Samuel Shugert.....Physician.....Georgetown, D. C.
1875. Dolliver, Robert Henry.....Clergyman .....Cherokee, fowa.
1875. Dolliver, Jonathan Prentiss.....Lawyer .....Fort Dodge, Iowa.
1875. Goldon, Franklin A.....Teacher.. .....————. Oregon.
1875. Martin, James Virginius.....Teacher.....————, Indiana.
1875. Peterson, James Jackson.....Editor ..... Huntington, West Virginia.
1875. Purinton, Aaron Lyon.....Sup't City Schools...Parkersburg, West Virginia.
1876. Anderson, John C.....Ranchman .. ..Bakersville, California.
1876. Frazier, Luke H.....Lawyer .....Uniontown, Pa.
1876. Hubbard, Harry Dana.....Deceased.
1876. Ison, Wiley Owens.....Department Clerk...Washington, D C.
1876. Kemp, Howard Mason.....Physician ....Bloomington, Md.
1876. Laidley, George S..... .....Teacher.....Charleston. West Virginia.
1876. Nash, James Henry.....Lawyer.....Winfield, West Virginia.
1876. Ramage, Thomas C.....Clerk of Circ't CourtClarksburg, West Virginia.
1877. Wetzel, Daniel Elliott.....Physician .....Huntington, West Virginla.
1877. Brown, William Gay.....Lawyer.....Kingwood, West Virginia,
1877. Dille, Clarence B.....Lawyer.....Morgantown, West Virginia.
1877. Hawthorne, Joseph H..... ...Lawyer.....Kansas City, Mo.
1877. Hood, Thomas M.....Physician.....Cassville, West Virginia.
1877. Rogers, Daniel R.....Physician .....————, Nebraska.
1877. Smith, Everett C.....Lawyer.....Ravenswood, West Virginia.
1877. Snively, Harry J..... Insurance Agent.....Chicago, Illinois.
1877. Steele, John L.....Reporter.....Pittsburgh, Pennsylvania.
1877. Stewart, James S.....Instructor.....West Virginia University.
1878. Courtney, Alpheus F..... .....Deceased.
1878. Dayton, Alston Gordon.....Lawyer.....Philippi, West Virginia.
1878. Lee, James McMillen..... .....Prin. Linsly Inst.....Wheeling, West Virginia.
1878. Morgan, Benjamin S..... .....State Supt. Schools...Charleston, West Virginia.
1878 Marsh, Enoch Jasper.....Pres't Scio College.....Scio, Ohio.
1878. Rich, Daniel .....Lawyer..... .....Pleasanton, Kansas.
1879. Purinton, George Dana ....Professor Chemistry State University...Fayetteville, Arkansas.
1879. Rogers, William A..... .....Lawyer.....Cincinnati, Ohio.
1879. Wade, Spencer S..... ...Physician..... .....Morgantown, West Virginia.
1880. Grafton, Charles Edwin.....Civil Engineer.....Rockford, Illinois.
1880. Keenan, Bruce L.....Lawyer.....Wichita, Kansas.
1880. Marsh, John Nelson.....Clergyman.....Morgantown, West Virginia.
1880. Pearre, George A..... .....Lawyer.....Cumberland, Md.

1880. Waters, A. A.....Clergyman.....Wilber, Nebraska.
1881. Hodges, Thomas E.....Prin. Marshal Col'ge..Huntington, West Virginia.
1881. Hyland, William L.....Lawyer.....Osceola, Iowa.
1881. Ogden, Howard N..... .....Lawyer.....Fairmont, West Virginia.
1882. Boyd, Thomas R.....Editor ....Galva, Illinois.
1882. Brown, Talma Kent.....Principal Oakland School...Maryland.
1882. Courtney, David Hall.. .....Physician .....Mount Morris, Pa.
1882. Cox, Arthur L.....Lawyer.. ....Texas
1882. Hodges, Theophilus E.....Teacher..... .....Buckhannon, W. Va.
1882. Jeffries, Elias D.....Clergyman .....——— Kansas.
1882. Lawhead, James Henry.....Physician .....Smithfield, Pa.
1882. Lewis George C.....U. S. Gov. Clerk .....Clarksburg, West Virginia.
1882. Stewart, James Henry.....Farmer .....Raymond City, West Virginia.
1883. Baker, George C.....Lawyer ..... Morgantown, West Virginia.
1883. Boyers, Luther M..... .....Lawyer..... ..... Memphis, Tennessee.
1883. Brown, Benjamin.....Lawyer.....Charleston, West Virginia.
1883. Brown, Samuel B.....Prin. Normal SchoolGlenville, West Virginia.
1883. Bland, William T..... Weston, West Virginia.
1883. Corke, Jacob F.....Lawyer.....Charleston, West Virginia.
1883. Foster, George B.....Clergyman ....Saratoga, New York.
1883. Hough, Walter.....Smithsonian Inst'n..Washington, D. C.
1883. Lazzell, Isaac G..... ..Teacher.....——— Arkansas.
1883. Johnston, John L.....Civil Eng. B. & O. Rd Philadelphia, Pennsylvania.
1883. Musgrave, John E.....Physician.....Peabody, West Virginia,
1883. Wells, S. P., Jr.,.....Manufacturer.....Parkersburg, West Virginia.
1884. Barbe, W. T. W.....Editor .....Parkersburg, West Virginia.
1884. Michael, W. H.....Professor of Latin. ....Wake Forest College, N. C.
1884. Robinson, Harry L.....Lawyer.....Uniontown, Pennsylvania.
1884. Berkeley, R. C., Jr.,..... .....Student.....University of Virginia.
1885. Adams, Nelson D.....Editor .....Wheeling, West Virginia.
1885. Armstrong, Robert,.....
1885. Bush, Asa B .....Asst. Shep. College...Shepherdstown, West Va.
1885. Fleming, Harvey.....Editor .....Witchita, Kansas.
1885. Meadows, B. W..... ————————Morgantown, West Virginia.
1885. Sweeny, John D..... .....Asst. Prin. Nor. Sch. Concord, West Virginia.
1885. Tapp, Robert W.....Teacher.....Vicksburg, Mississippi.
1886. Armstrong, R. A.....Prin. Nor. School .....West Liberty, West Virginia.
1886. Berkeley, W. N., Jr.,. .....Student.....University of Virginia.
1886. Dawson, Richard W.....Law Student.....West Virginia University.
1886. Waters, Nacy M.....Prin. Graded Sch.....Morgantown, West Virginia.
1886. Yost, Zoath F.....Insurance Agent.....Wheeling, West Virginia.

SCHEDULE OF HOURS AND CLASSES—University Department.

CHAPEL AT 8:15 A. M.

MONDAY.

8:30 a. m.	9:30 a. m.	10:30 a. m.	11:30 a. m.	3 p. m.	3:30 p. m.	4 p. m.	5 pm
Junior Metaphysics.	Intermediate Greek.	Intermediate Latin.	Sen. Metaphysics.	Anat., Phys., and Hy.		Chem.	Drill.
Junior Mathematics.	Junior German.	Junior French.	Sen. English.	Physics.	Law.		
Botany.	History.	Intermediate Math.	Sen. German.				
Analytical Chemistry.	Junior English.	Geology.	Jun. Greek,				
	Const. & Inter. Law.	Equity.	Equity (cont.)				

TUESDAY.

Junior Metaphysics.	Senior Greek.	Senior Latin.	Sen. Metaphysics.	Anat., Phys., and Hy.		Chem.	Drill.
Junior Mathematics.	Junior German.	Junior French.	Sen. English.	Agriculture.	Law.	Jun. Rhet.	
Botany.	History.	Senior Mathematics.	Sen. French.				
Analytical Chemistry.	Junior English.	Zoology.	Jun. Latin				
	Const. & Inter. Law.						

WEDNESDAY.

Junior Metaphysics.	Intermediate Greek.	Intermediate Latin.	Sen. Metaphysics.	Anat., Phys., and Hy.		Chem.	Drill.
Junior Mathematics.	Junior German.	Junior French.	Sen. English.	Physics.	Law.		
Botany.	History.	Intermediate Math.	Sen. German.				
Analytical Chemistry.	Junior English.	Geology.	Jun. Greek.				
	Const. & Inter. Law.	Equity.	Equity (con.)				

Vocal Music at 2 p. m. on Tuesday and Thursday.

SCHEDULE OF HOURS AND CLASSES—Continued.

CHAPEL AT 8:15 A. M.

THURSDAY.

8:30 a. m.	9:30 a. m.	10:30 a. m.	11:30 a. m.	3 p. m.	3:30 p. m.	4 p. m.	5 p.m
Junior Metaphysics.	Senior Greek.	Senior Latin.	Sen. Metaphysics.	Anat., Phys..	Law.	Chem.	Drill.
Junior Mathematics.	Junior German.	Junior French.	Senior English.	and Hy.		Sen. Rhet.	
Botany.	History.	Senior Mathematics.	Senior French.	Agriculture.			
Analytical Chemistry.	Junior English.	Zoology.	Junior Latin.				
	Const. and Inter. Law.						

FRIDAY.

Junior Metaphysics.	Intermediate Greek.	Intermediate Latin.	Sen. Metaphysics.	Anat., Phys.,	Law.
Junior Mathematics.	Junior German.	Junior French.	Senior English.	and Hy.	
Botany.	History.	Intermediate Math.	Senior German.	Physics.	
Analytical Chemistry.	Junior English.	Geology.	Junior Greek.		
	Const. and Inter Law.	Equity.			

SATURDAY.

Junior Latin.	Zoology.
Law.	

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CATALOGUE

OF

WEST VIRGINIA UNIVERSITY

MORGANTOWN.

1888-9.

ANNOUNCEMENTS.

FOR

1889-90.

CHARLESTON:
MOSES W. DONNALLY, PUBLIC PRINTER.
1889.

CALENDAR

JUNE, 1889—DECEMBER, 1890.

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UNIVERSITY CALENDAR.

The University year includes forty-one weeks, divided into three terms, beginning respectively the first Wednesday of September, the fourth Wednesday of November and the second Wednesday of March.

The annual commencement is on the second Wednesday of June.

1889.

May 31st, June 8th—Final Examinations.

June 8th—Saturday 8 P. M., Regent's Prize Contest in Declamation.

June 9th—Sunday, 11 A. M.. Baccalaureate Sermon by Rev. Wayland Hoyt, D. D., in University Hall.

June 10th—Monday, 8 P. M., Address before the Literary Societies, by Hon. J. P. Dolliver—Class of '75.

June 11th—Tuesday, 8 P. M., Annual Contest between the Literary Societies.

June 12th—Wednesday, 9:30 A. M., Commencement.

" 2 P. M., Alumni meeting in the Chapel.

" 4 P. M., Anniversary of the West Virginia Historical Society.

Vacation till the first Wednesday in September.

September 3d—Entrance Examinations.

September 4th—Wednesday, 8:15 A. M., Fall Term begins.

November 18th-26th—Fall Examinations.

November 27th—Wednesday, Winter Term begins.

November 28th—Thursday, Thanksgiving Holiday.

December 3d—Tuesday, 7 P. M., Senior Orations.

December 20th—Friday, 1 P. M., Christmas Holidays begin.

1890.

January 2d—Thursday, 8:15 A. M., Exercises resumed.

February 21st—Friday, 7 P. M., Senior Orations.

March 3d-11th—Winter Term Examinations.

March 12th—Wednesday, Spring Term begins.

June 2d-7th—Final Examinations.

June 7th—Saturday, 8 P. M., Regent's Prize Contest in Declamation.

June 8th-11th—Commencement.

BOARD OF REGENTS.

Dist.	Name of Regent.	P. O. Address.
1.	J. B. SOMMERVILLE	Wheeling.
2.	CLARENCE L. SMITH	Fairmont.
3.	PEREGRIN HAYS	Glenville.
4.	D. D. JOHNSON	Long Beach.
5.	JNO. G. SCHILLING	Spencer.
6.	EDWARD A. BENNETT	Huntington.
7.	WIRT A. FRENCH	Princeton.
8.	M. J. KESTER	Union.
9.	D. C. GALLAHER	Charleston.
10.	THOMAS J. FARNSWORTH	Buckhannon.
11.	JOSEPH MORELAND	Morgantown.
12.	JOHN A. ROBINSON	Patterson's Creek.
13.	W. W. BROWN	Kabletown.

Officers of the Board.

JOHN A. ROBINSON, President.
JOHN I. HARVEY, Treasurer.
W. P. WILLEY, Secretary.

Executive Committee.

JOHN A. ROBINSON, Chairman.
JOSEPH MORELAND.
CLARENCE L. SMITH.
J. B. SOMMERVILLE.
T. J. FARNSWORTH.

Superintendent of Grounds and Buildings.

A. W. LORENTZ.

FACULTY AND TEACHERS.

E. M. TURNER, LL. D., PRESIDENT.
Professor of Rhetoric.

D. B. PURINTON, LL. D., VICE PRESIDENT.
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., LIBRARIAN.
Professor of Modern Languages and Literature.

I. C. WHITE, PH. D.,
Professor of Geology.

A. W. LORENTZ, A. M.,
Principal of Preparatory Department.

ST. GEORGE T. BROOKE,
Professor of Common and Statute Law.

W. P. WILLEY, A. M., SECRETARY,
Professor of Equity Jurisprudence and History.

A. R. WHITEHILL, A. M.,
Professor of Agriculture, Chemistry and Physics.

P. B. REYNOLDS, A. M.,
Professor of English.

JAMES W. HARTIGAN, A. M., M. D.,
Professor of Biology.

LIEUT. EDWARD S. AVIS, 5TH INFANTRY, U. S. A.,
Professor of Mathematics and Military Science and Tactics.

THOMAS M. JACKSON,
Professor of Civil and Mining Engineering.

JAMES S. STEWART, M. S.,
Assistant Professor of Mathematics.

EDWARD S. ELLIOTT, A. B., LL. B.,
Assistant in Preparatory Department.

J. E. BROWN,
A. J. HARE,
H. G. STOETZER.
Student Assistants.

STATE AGRICULTURAL EXPERIMENT STATION.

PROF. JOHN A. MYERS,
Director.

———————————

**Chemist.*

———————————

**Microscopist.*

———————————

** Veterinarian.*

———————————

**Dairyman.*

*To be elected.

THE UNIVERSITY.

Origin.

The West Virginia University, as originally organized, was chartered by an act of the Legislature passed February 2d, 1867, and was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public land scrip" donated by Congress to the several States under the act of July 2, 1862, providing for the establishment in each State of an Agricultural College, were given to the College, and constitute part of the endowment fund. By subsequent act of the Legislature the name of the institution was changed to "West Virginia University," and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of its work.

Location.

Morgantown, the seat of the University, is pleasantly situated on the right bank of the Monongahela river and is surrounded by a picturesque country. It is accessible by rail from Fairmont, on the main line of the Baltimore and Ohio Railroad, and is at the head of the slackwater improvement now making by the Federal Government in the Monongahela. This will, when completed, give direct communication by water with Pittsburgh. Morgantown is a small place, where there are few temptations to allure young men from study, and it is in this respect an admirable location for an educational institution. Its climate is healthful, the air pure and bracing and free from malaria.

Grounds and Buildings.

The University grounds, comprising about eighteen acres, lie just beyond the borough limits to the north of the town, and command a beautiful view of the Monongahela river and the surrounding country. The present buildings consist of two large and commodious structures, three stories high, which contain the lecture and recitation rooms, library, museum, chapel, commencement hall, and the rooms of the two literary societies. The increased attendance of the last two years has caused some embarrassment in providing rooms for the preparatory classes, which must necessarily be taught in small sections in order to accomplish the best results. There is also special need of a separate building for the accommodation of the library and museum, and also a Science Hall, for the schools of Biology, Chemistry and Physics, and Engineering. It is hoped that some friend of the University who has the financial ability, will, in the near future, provide one or other of these buildings.

It is expected, during the present calendar year, to erect a building for an armory, gymnasium and commencement hall, if the funds at the disposal or the Board of Regents will permit, the old armory building having been turned over to the Experiment Station and enlarged, to be used as a laboratory for Station work.

Organization.

The organization of the University includes the usual courses of collegiate study, the Classical and the Scientific; a Military Department; a Law School, leading to the degree of Bachelor of Laws; a school of Civil and Mining Engineering, leading to the degree of Civil Engineer; a Preparatory Department, and a State Agricultural Experiment Station.

Income; Tuition.

The endowment fund now amounts to about $108,000. The interest on this fund and the annual appropriations made by the Legislature, constitute the income of the University. Tuition is practically free to all young men in the State over fifteen years of age, each county being entitled to one student under free tuition for every five hundred of population in the county. This does not apply, however, to the Law School.

State Cadets.

There are appointed by the members of the Board of Regents, eight young men from each of the thirteen Senatorial districts of the State, under regulations prescribed by the Legislature, who, besides receiving free tuition, are furnished their books and stationery. These young men mainly constitute the "Cadet Corps" and receive instruction in the Military Department of the University.

The Calendar.

The University year begins on the first Wednesday of September, and closes on the second Wednesday of June, when the annual commencement takes place. The work of the year is divided into three terms. The Fall Term begins on the first Wednesday of September, the Winter Term on the fourth Wednesday of November, and the Spring Term on the second Wednesday of March. There is a recess of two weeks for the Christmas holidays; otherwise the work of the year is continuous.

Requisites for Admission.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Applicants for admission to the Preparatory department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic.

IV. Those wishing to enter the Academic Department must stand a satisfactory examination on the foregoing list of studies, and also such studies of the Preparatory Department as are related to the academic schools they desire to enter.

V. Students coming from the Normal School or any of its branches, or from approved High Schools, are admitted without examination, upon certificate, under regulations mentioned in a subsequent part of this catalogue under the "Prepararory Department."

VI. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VII. All students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally.

VIII. The first day of the Fall term is devoted to the enrollment and classification of the students present. A new roll is made for each term, and no one will be recognized as a student, or permitted to recite in any class, until his name is entered on the official roll kept by the Secretary of the Faculty. *This rule applies to all students.* If any

one who is present at the beginning of any term for the purpose of entering as a student, shall delay matriculating, beyond the time allowed for so doing, he will not thereafter be allowed to enroll, except by special permisston of the Faculty, upon the presentation of a satisfactory explanation.

Entrance Examinations.

All new students are expected to be present on the day preceding the opening of the Fall Term, being for this year September 3d, in order to be examined on the studies required for admission, and on those required for admission to the particular schools they desire to enter. They should report at the President's room at the University not later than 9 o'clock A. M., on September 3d, and be by him directed to the examiners in the various branches.

Directions for New Students.

Students who have not before attended the University should, on arriving, report to the President, who will assist them in procuring rooms, and give them directions as to payment of fees, matriculation, enrollment and selection of their studies.

Tuition.

Tuition is free to all students from this State over fifteen years of age, in the several departments of the University, except in the School of Law: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, have free tuition, and all others are charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States are charged $12.50 per term for tuition in the University Department, and $5 per term in the Preparatory Department.

Tuition in the Law Department.....	$ 8 00 per term.
Contingent Fee in all Departments.....	2 00 per term.

Students in Analytical Chemistry will be charged a fee of $20 per year to cover the use of material and wear and tear of apparatus in their hands.

All fees must be paid to the Treasurer, promptly, on the first day of each term.

There will be no variations nor deductions from these rates for any cause whatever, except protracted illness.

Ministerial students are admitted free, upon proper testimonials.

Regulations Concerning Text-Books Issued to Cadets.

Under the laws governing the University, appointed cadets are furnished with the necessary text-books at the expense of the State.

At the end of each term all cadets must account to the commandant for the text-books so furnished them; and any cadet who shall abuse or fail to return any book with which he is charged, shall pay to the Treasurer the value thereof.

All books returned by cadets shall be kept in store by the book agent and re-issued so long as they may serve the purpose of text-books.

Rooms and Boarding.

Students rent rooms in private houses in the town, there being as yet no domitories on the University grounds. Room rent ranges from 75 cents to $1.25 per week, everything furnished except lights and towels.

Board is furnished either by private families at a stated price per week, or more generally by the system of club boarding.

A number of students form a club, and employ some person to cook for them and furnish room and table ware. One of the club acts as caterer and buys the supplies, of which an account is kept and the actual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.75 to $2.00 per week. Board in private families costs $2.00 to $2.50 per week.

Washing cost from $1.00 to $1.50 per month.

Expenses.

The expenses of the student vary according to his habits. The *necessary* expenses of a student at the University are estimated according to the following table, excluding clothing and traveling expenses, for the University year of forty-one weeks:

Room rent	from	$31 00	to	$ 52 00
Boarding	"	70 00	to	103 00
Washing	"	11 00	to	16 00
Lights and Incidentals	"	20 00	to	20 00
Text Books (average)	"	10 00	to	10 00
Total		$142 00		$201 00

To this must be added the tuition fees of those students who are required to pay tuition.

Parents and guardians are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

Discipline.

Discipline is directed to the development of manliness and self-respect among the students. They are expected to be gentlemanly in their conduct and correct in their habits, and to deport themselves in all places as reputable and honorable citizens. No young man will be allowed to retain his connection with the University who persists in habits of dissipation or other disreputable conduct.

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises. A report is sent at the beginning of each term to parents or guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, or if he shall absent himself from recitation or morning roll call more than twice in any month, without good cause, the parent or guardian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permisson.

The attention of parents and guardians is especially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his class-mates that he be punctual in his place from the first day of the term to the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University, and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with his studies.

Religious Worship.

The exercises of each day are opened with reading the scriptures, singing and prayer, at which all the students are required to be preent. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject.

"*Resolved*, That each student will be required to attend on

Sabbath the public religious service of his choice, or, if he is a minor, as his parents or guardian may direct; but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

Regents' Prizes.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University schools, who shall write the best essay on a subject to be selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations:

1. A student competing for the prize sha'l write on the subject furnished or prescribed as above, the manuscript to be in his own handwriting.

2. All essays shall have fictitions signatures, accompanied with a sealed letter containing both the real and fictitious names.

3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.

4. The successful competitor shall read his essay in public on such evening as the Faculty may direct.

The Regents' Prize of $15.00 for Declamation, shall be presented to any student whose studies are entirely in the Preparatory Department, who shall, upon contest, deliver the best declamation; the prize to be awarded by a committee appointed by the President of the Board of Regents.

In the year 1887, these prizes were awarded as follows: Essay, Mr. A. J. Hare; Declamation, Mr J. W. Knight.

English Literature Prize.

A prize of $50 is offered by the President of the University for special excellence in the School of English, under the following regulations:

1. The competitor must be a student in the collegiate department of the University, and not in the school of Law.

2. He must have completed the course in the school of English or be a member of the Senior class in the school of English. His average standing in the regular work of this school during both years, must not be below 8.

3. The examination will be a special one on subjects studied during the course, the subjects for each year to be announced by the Professor of English; and the subject of the essay will be some author or period of English or American literature, to be likewise announced from year to year.

4. The essay must be handed to the Professor of English by May 15th. The examination will take place between May 15th and June 1st.

5. The average marks of essay and examination combined will determine the award.

6. Students intending to compete for the prize must give their names to the Professor of English not later than January 1st.

7. The prize will not be awarded unless the essay and examination are worthy.

For the year 1889-90, the subject of examination will be as follows:

Milton's Lycidas, (Sprague).

The examination will be based on a critical study of this work.

Subject of Essay—The Literary merits and influence of Chaucer.

This prize was awarded in 1888, to Mr. D. L. Jamison, class of 1888.

Prize Foundations.

The attention of those interested in the work of higher education, and especially in the work of the University, is respectfully called to the desirability of stimulating students to special excellence in some study, or in oratory, by offering prizes of money for competition. Citizens of our State who have the financial ability, could confer no more lasting benefit than by placing in the hands of the Board of Regents as a trust fund, a certain sum of money as a prize foundation, the interest of which shall be annually offered as a prize for special excellence in some department of study. Whatever excellence is attained by the work of the University will react upon the whole system of State education, and be a stimulus to ambitious and deserving youth throughout the State.

Library.

About five thousand volumes have been carefully selected and placed on the shelves of the Library, including not only many choice and valuable books of reference, but also standard works in the various departments of History, Biography, Theology, Agriculture, Arts, Sciences and general Literature.

The friends of education are respectfully requested to make contributions to its shelves.

A deposit of $2.00 is required of all students who wish to avail themselves of the previleges of the Library. This is intended to secure the safe keeping and return of books borrowed.

The Library is open to students on Tuesdays and Thursdays from 8:30 to 9 A. M., and on Friday from 1:30 to 3 P. M., and at such other times as the Librarian may find convenient, on application.

Reading Room.

Many of the journals of the State and valuable religious papers of some of the leading religious denominations are gratuitously sent to the reading room of the University. The lead-

ing periodicals of this country and Europe are regularly subscribed for and placed upon its files.

Music.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labeled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

The vicinity of the University offers unrivaled advantages for the study of Practical Geology. Especial attention is paid to this branch.

Donations to the Museum.

Indian Relics, C. F. Keys, Keyser, W. Va.
Fossil Ferns, L. A. Lindemuth, Wheeling.
Oil Sands, W. S. Guffey, Pittsburg, Pa.
Section of Large Elder, J. M. Hackney, Morgantown.
Fossil Plants from Dakota, J. Sternberk, Lawrence, Kan.

Literary Societies.

There are two of these (the Parthenon and Columbian) in connection with the University, supplied with suitable halls handsomely furnished, whose exercises in Composition, Reading, Oration, Debate and Criticism are, in many respects, of great advantage to the student. They also afford facilities for an acquaintance with parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during commencement week.

The Collegiate Department.

COLLEGIATE DEPARTMENT.

FACULTY.

E. M. TURNER, LL. D., PRESIDENT,
Professor of Rhetoric.

D. B. PURINTON, LL. D., VICE-PRESIDENT,
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M.,
Professor of Modern Languages and Literature.

I. C. WHITE, PH. D.,
Professor of Geology.

ST. GEORGE T. BROOKE,
Professor of Constitutional Law.

W. P. WILLEY, A. M.,
Professor of History.

A. R. WHITEHILL, A. M.,
Professor of Agriculture, Chemistry and Physics.

REV. P. B. REYNOLDS, A. M.
Professor of English.

JAMES W. HARTIGAN, A. M., M. D.,
Professor of Biology.

LIEUT. EDWARD S. AVIS, 5TH INFANTRY, U. S. A.,
Professor of Mathematics and Military Science and Tactics.

COURSES OF STUDY IN THE COLLEGIATE DEPARTMENT.

Two regular courses of study are offered in the Collegiate Department, leading to the degrees of Bachelor of Arts and Bachelor of Sciences. The degrees of Master of Arts and Master of Sciences are also given for additional attainments in the classical and scientific courses respectively.

Thedetails of the requirements for these degrees, and of the courses of study for each of them, are given on subsequent pages.

Besides the regular courses for degrees, students who do not expect to stand for a degree are allowed to select such studies in the Collegiate Department for which they are prepared as may be preferred by them and are adapted to their life-work. All students are, however, advised to take a regular course as far as possible.

The course of study for the Bachelor's degrees is intended to cover four years. Students who undertake to complete the course in less time must necessarily burden themselves with work to such an extent that they have no time for reading or research outside of the regular class room work. The widened field of study and research in all departments of knowledge makes it impossible, in a college course covering the usual curriculum of study, to do more than give the main facts embraced in the great departments of Philosophy and Science, which must be supplemented by the independent study of the student. If his time is all taken up in preparing recitations, he has no time for specializing his work in any department which may be particularly attractive to him, or in the line of his subsequent work.

Requirements for Admission.

To enter the Collegiate Department, students must have completed the course required for admission, as stated in the course of study for the Preparatory Department; *provided*, that students who have not completed all the preparatory studies will be re-

quired to take, first, the studies of the Preparatory Department in which they are deficient; and, in addition to these, they may take such studies in the Collegiate Department as they are prepared to take, under the advice of the Faculty.

Each student in the Collegiate Department is required to attend at least sixteen and *not more than eighteen* recitations per week, and to adhere, *throughout the year*, to the studies selected on his matriculation, unless the Faculty, for good cause shown, allow him to attend a less or greater number, or to make an exchange.

Students will be classed in the several subjects of study, according to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

Distribution of Studies.

The subjects of study in the Collegiate Department are distributed into ten groups, called "schools," as follows:

Rhetoric, Metaphysics, Ancient Languages, Modern Languages, Geology, History, Mathematics, Agriculture, Chemistry and Physics, English and Biology.

Examinations.

Written examinations are held in each school at the close of each term, and at such other times as each Professor may deem necessary.

No student will be excused for non-attendance at examinations, except upon presentation of a reason which may be considered valid by the Faculty.

Any student whose term marks for any term average 8.5 on a scale of ten, who is absent, for some unavoidable cause, from the regular examination held at the close of such term, may be excused from passing such examination—*provided*, that the Faculty will first determine whether the cause for absence is sufficient; and provided further, that such exemption from examination will not be allowed for more than one term in any academic year. In cases of this kind, the examination mark for the term missed will be the average of the examination marks of the other two terms of the academic year.

Grading.

Recitations and examinations are graded on a scale of 1 to 10, of which 1 is the lowest and 10 the highest attainable. In order to pass from a lower to a higher class in any study, a student must attain an average standing of 7 on a scale of 10, for the year's study in that class.

In ascertaining a student's standing in his classes, examination marks count one-half and recitation marks one-half.

The time allowed for examination shall not be less than two hours, and not more than five hours unless specially announced by the Professor in charge. A certificate of promotion is given to each student who attains a standing of 7 for one year's continuous study in any class except the highest.

A diploma is given to each student attaining a standing of 7 during the entire course of study in any school, or in any of the following subjects: Latin, Greek, French, German, Geology, Natural History, Chemistry, Physics, Analytical Chemistry, Anatomy, Physiology and Hygiene.

Requirements for Degrees.

The degree of Bachelor of Arts requires the completion of the following course of study with an average standing of 7 in each of the studies named, in the respective years.

This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.

(NOTE---The figures in parenthesis indicate the number of recitations per week. The hours for recitation are designated in the *Schedule of Recitations* at the end of this catalogue. While students are not required to confine themselves strictly to the order of study as here laid down, in making their selections, they are advised to do so, in order to avoid conflicts in hours, as the schedule of recitations is arranged to suit this order, and changes will not be made to accommodate those who make a different selection.)

In order to enter this course of study, applicants must have completed the course of study in the Preparatory department, or its equivalent, *except Book-keeping.*

Bachelor of Arts Course.

FIRST YEAR STUDIES.

Junior Latin (3); Junior Greek (3); Junior Mathematics (5); Junior English (5); Physics (3).

SECOND YEAR STUDIES.

Fall and Winter Terms. Intermediate Latin (3); Intermediate Greek (3); History (5); Inorganic Chemistry (4); Rhetoric (2).

Spring Term. Drop Chemistry and take Field Botany (4).

THIRD YEAR STUDIES.

Fall and Winter Terms. Senior Latin (elective) (2); Senior Greek (elective) (2); Junior German (elective) (5); Juuior Metaphysics (5); Senior English (5); Zoology (3).

Spring Term. Drop Zoology and take Geology (5).

Four literary performances during this year, under the Professor of English.

FOURTH YEAR STUDIES.

Senior Metaphysics (5); Anatomy, Physiology and Hygiene (5); Senior German (elective) (3), or Junior French (elective) (5).

Two original public performances in chapel; oration or essay for commencement.

Electives. In the third year Junior German (5) and in the fourth year either Senior German (3) or Junior French (5) may be taken instead of the third (Senior) year of Latin *and* Greek. Or, Junior French (5) or Junior German (5) in the fourth year may be taken instead of Senior Latin *or* Senior Greek in the third year. No other electives or substitutions are allowed for this degree.

Master of Arts Course.

The degree of Master of Arts requires the completion of the whole collegiate course in all schools, both Arts and Sciences, except Analytical chemistry and the laboratory work in the school of Biology. It also requires the completion of the course in Constitutional Law in the Law School.

A satisfactory general examination on all subjects studied will be required of candidates for this degree.

Bachelor of Sciences Courses.

The degree of Bachelor of Sciences requires the completion of the following course of study, with an average standing of 7 in each of the studies named in the respective years.

This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.

In order to enter this course of study, applicants must have completed the course of study in the Preparatory Department, or its equivalent, *except Greek.*

FIRST YEAR STUDIES.

Junior Mathematics (5); Junior English (5); Junior French (5); Physics (3).

SECOND YEAR STUDIES.

Intermediate Mathematics (3); Senior French (3); History (elective) (5); Chemistry (4); Rhetoric (2), and, in the Spring Term, Field Botany (4).

THIRD YEAR STUDIES.

Fall and Winter Terms.—Senior Mathematics (2); Junior Metaphysics (5); Junior German (5); Zoology and Structural Botany (5); and Senior English (elective) (5).

In the Spring Term, Geology (5) takes the place of Zoology and Structural Botany.

Four literary performances required during the year, under the Professor of English.

FOURTH YEAR STUDIES.

Senior Metaphysics (5); Senior German (3); Anatomy, Physiology and Hygiene (5); and, during the Fall and Winter terms, Agriculture (2).

Two original public performances in the chapel, and an oration or essay for commencement.

Elective.—History (5) in the second year, may be taken in the place of Senior English (5) in the third year. No other election or substitution is allowed for this degree.

Master of Sciences Course.

For the degree of Master of Sciences, both Senior English and History are required; and also Analytical Chemistry and the dissections and microscopy of the school of Biology.

The various subjects and text books in the several studies enumerated in the above courses are set out in full, by years and terms, in the announcements of the Professors of the several schools on the next following pages.

Students taking a partial course will select their studies strictly with reference to the schedule of recitations, as hours for recitation cannot be changed for their accommodation.

Academic Degrees Conferred.

At the last Commencement, June 9th, ~~1887~~ 1888:

Master of Sciences—James D. Cox, Howard H. Emmert.

Bachelor of Arts—C. Hartmeyer, David L Jamison, Henry H. Ryland, Frank Snider.

Master of Arts (in course)—N. D. Adams, A. B. Bush, H. Fleming, R. W. Tapp.

Master of Sciences (in course)—R. Armstrong, J. D. Sweeney.

Bachelor of Laws—Charles A. Clark, Alexander Dupuy, Melville

H. Fleming, Lewis C. Lawson, Robert K. McComb, Addison F. Morris, George I. Neal, Ulysses S. G.Pitzer, Thomas R. Shepherd, Thomas J. Woofter.

Honorary Degrees.

Doctor of Laws—James Morrow, Jr.; Rev. W. H. Woolery, President of Bethany College.

Doctor of Divinity—Rev. John P. Hyde.

Doctor of Philosophy—Prof. George Dana Purinton, of Missouri University.

Master of Arts—Prof. J. W. Hartigan, Prof. P. B. Reynolds.

ANNOUNCEMENTS

OF THE

COURSE OF INSTRUCTION.

BY THE

PROFESSORS IN THE COLLEGIATE DEPARTMENT.

RHETORIC.

PRESIDENT TURNER.

The course of study in this school requires two hours per week during the second year of the collegiate course for the classical and scientific degrees.

To enter this school with a view to being passed for a degree, the student must have completed the course of the Junior year in the School of English.

In the Fall term the subjects of study will be the elementary parts of discourse, diction, seutence structure, figures. During the Winter term, lectures on the Principles and Processes of Discourse, and its various forms, will be given. In the Spring term the principles of criticism will be investigated, as preparatory to the Senior year of the School of English.

If time allows, practical drill in elocution will constitute part of the work of the year.

Analyses of themes, and formal essays will be required throughout the year.

Text-book—first term—Hart.

Metaphysics.

PROF. PURINTON.

The course of study embraces Psychology, Logic, Ethics, Natural Theology, and evidences of Christianity, requiring two years for its completion.

Instruction is given by means of text book recitations, lectures and parallel readings.

Wherever conflictnig theories are encountered, the various arguments and their necessary tendencies are presented to the student, and he is encouraged to investigate and judge for himself.

The basal facts and principles of all knowledge and belief are so presented as to avoid bigotry on the one hand, and skepticism on the other.

The course of instruction is as follows:

	Fall Term.	Winter Term.	Spring Term.
Junior Year.	Intellectual Science.	Intellectual Science.	Logic.
Senior Year.	Ethics.	Natural Theism.	Christian Theism.

Text books and books of reference:

Porter's Intellectual Science, Baine's Mental Science, Bascom's Psychology, McCosh's Intuitions, Hamilton's Lectures, Upham's Mental Philosophy, Edwards on the Will, Jevons-Hill's Logic, Mill's, Hamilton's, Coppee's, Atwater's, and DeMorgan's Logic.

The text book in Ethics, is Janet's Elements of Morals, with reference to the works of Wayland, Baine, Hopkins, Hickok, Dymond and Winslow.

In Natural Theology and Evidences of Christianity, no text book is used. A full course of lectures on Christian Theism is given, which are designed to cover the ground usually taken by text books on these subjects. Frequent reference is made to the best authors, ancient and modern.

Ancient Languages.

PROF. BERKELEY.

The subjects taught in this school are:

I. The Latin Language and Literature, in which there are three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text books used:

1. JUNIOR CLASS.

Fall Term—Virgil's Bucolics and Georgics.
Winter Term—Horace's Odes and Epodes.
Spring Term—Cicero de Senectute and de Amicitia.

2. INTERMEDIATE CLASS.

Fall Term—Livy; Bender's Roman Literature.
Winter Term—Horace's Satires and Epistles.
Spring Term—Cicero de Officiis.

3. SENIOR CLASS.

Fall Term—The Agricola and Germania of Tacitus.
Winter Term—The Annals of Tacitus.
Spring Term—The Annals of Tacitus (continued.)

In each class special attention is paid to the translation of English into Latin, and to the grammar and etymological structure of the language. A private course of parallel reading will also be prescribed whenever practicable.

Lexicons recommended for each Class—White's, Andrew's or Freund's Leverett's.

II. The Greek Language and Literature, in which there are also three classes, viz: *Junior*, *Intermediate* and *Senior*.

Text books used:

1. JUNIOR CLASS.

Fall Term—Herodotus.
Winter Term—Homer's Iliad.
Spring Term—Homer's Odyssey.

2. INTERMEDIATE CLASS.

Fall Term—Xenophon's Memorabilia; Jebb's Greek Lierature.
Winter Term—Plato's Apology and Crito.
Spring Term—Euripides.

3. SENIOR CLASS.

Fall Term—Demosthenes.
Winter Term—Demosthenes (continued).
Spring Term—Sophocles.

As mentioned above, in the case of the Latin language, special attention is paid to the translation of English into Greek, to the grammar and structure of the language, and to private courses of parallel reading.

Lexicon Recommended for each Class—Liddell and Scott's—the abridged edition for the Junior—the unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin and Greek according to the so called Continental method.

The Junior and Intermediate classes recite three times a week, and the Senior twice a week.

Modern Languages.

PROF. HARVEY.

In this School are taught French and German. In each Language, there are two classes, Junior and Senior. The Junior Classes are thoroughly drilled in the Etymological forms, and are practiced in the simpler forms of Syntax. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the Senior classes. Junior classes meet five times a week. Senior classes meet two or three times a week.

For admission to this school, students must have completed the course of study in English and Latin of the Preparatory Department, or their equivalent.

Text books :

JUNIOR FRENCH.

Fall Term—Whitney's Grammar, Super's Reader.

Winter Term—Grammar continued, Super's Reader continued.

Spring Term—Grammar continued, Colomba, Picciola, or selections from modern authors.

SENIOR FRENCH.

Fall Term—Voltaire's Charles XII, or other selection, Grammar and Exercise.

Winter Term—Corneille's Cid, Racine's Athalie, Grammar and Exercises.

Spring Term—Moliere's Misanthrope, Hugo's Ruy Blas, Saintbury's French Literature.

JUNIOR GERMAN.

Fall Term—Joynes-Meissner's Grammar and Grimm's Mærcher.

Winter Term—Grammar continued, Grimm's Mærcher continued.

Spring Term—Grammar continued, Schiller's Jungfrau von Orleans.

SENIOR GERMAN.

Fall Term—Benedix's Dr. Wespe, or Lessing's Minna von Barnhelrn, Grammar and Exercises.

Winter Term—Gœthe's Ephigenia or Hermann and Dorothea, Lessing's Nathan der weise.

Spring Term—Fouque's Undine or Selections, Hosmer's German Literature.

Geology and Field Botany.

PROF. WHITE.

At a recent meeting of the Board of Regents, Prof. White was, at his request, relieved of the studies of Zoology and Structural Botany, they being transferred to the Chair of Biology. By this change the work in the Chair of Geology was condensed into one term, so that hereafter both Geology and Field Botany (which is still attached to the Chair of Geology,) will begin with the Spring Term, and be finished during the same.

The class in Geology will meet every day in the week except Saturday, and the Field Botany, every day except Monday.

Any one in attendance on the University can enter the class in Boatny, but for entrance to the class in Geology the student is required to have Certificates of Proficiency in Zoology, Botany and Chemistry. This rule does not apply, however, to candidates for the degree of Civil Engineer.

Excursion.

During the Spring Term of each year, usually about the middle of May, a Geological excursion will be taken through West Virginia and adjoining States, for the purpose of training the student in the work of Practical Geology. No State in the Union has so many advantages to give the student in this particular line. The site of the University itself, located as it is in the heart ot the great Appalachian Coal Field, presents unrivaled facilities for the study of all problems connected with this useful science. and especial attention is given to every phase of Economic and Practical Geology, during term work as well as during the excursion. This excursion will be required of all students who graduate in the Scientific Department of the University, or who wish the diploma of this school (Geology), but it is open to all who take the study. The necessary expenses of the excursion never exceed $25, unless the members of this class desire to go further, or traverse more ground than is customary.

Text books:

Geology, Leconte's Elements. For reference, Dana's Manual, Lyell's Principles, and Geike's Text Book.

Botany, Gray's School and Field Book.

History.

PROF. WILLEY.

The course of instruction in this school is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form

a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but also the philosophy of history.

The method of instruction is by text-books, collateral readings and lecture.

The course of study extends through three terms, the class reciting five hours per week. The Fall term is given to the division embracing Ancient history, and the Winter and Spring terms to Mediæval and Modern history, including United States history.

The text-books are Myers' Ancient, Mediæval and Modern histories; with *reference* to Ridpath's Encyclopædia of Univeral History, Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays (first and third series). Arnold's Lectures on Modern History. Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

A course of lectures is given during the second and third terms on "Civics"; tracing the history of governments from primitive times through successive stages of development down to the present day, and explaining in detail the governmental machinery of modern towns, counties, states and nations.

Agriculture, Chemistry and Physics.

PROF. A. R. WHITEHILL.

Instruction in the several departments of this school is by text-books, lectures and experiments. The courses in Physics and General and Analytical Chemistry are continued throughout the year; the course in Agriculture is completed at the end of the Winter term.

In *Agriculture*, the attention of the class is directed to the following subjects: The organic and inorganic food of plants, their germination, development and accompanying physical changes; the chemistry and physics of soils, their origin, formation, classification, exhaustion and relation to vegetable nutrition; drainage, irrigation, sub soiling, manures, grain and forage crops, the care and management of stock, etc.

The new edition of Emerson and Flint's Manual of Agriculture and Wyatt's treaties on Soils, Plants and Manures are used as text-books, and the subject matter is illustrated, as far as possible, by experiments in the laboratory.

In *Physics*, as a preparation for after study, the leading principles of Mechanics are studied during the Fall term. During the Winter term, Electricity, Magnetism and Sound are taken up in the order named, and these are followed by Heat and Light during the Spring term. Problems and experiments are introduced

largely throughout the course, and the modern doctrines of Molecular Physics are fully explained. Students may enter the class at the beginning of any term, but the entire course requires one year for its completion.

Arnott's Physics and Avery's Natural Philosophy are used as text books, and the works of Deschanel, Ganot and other well-known authors are in the labratory, as books of reference.

In *Chemistry*, the subjects presented are the distinctive features of the study, the laws of chemical combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, allusion is made to the applications of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account. Students in this branch have access to a well equipped laboratory, and the recitations and lectures are fully illustrated by tests and experiments. Inorganic Chemistry and Chemical Philosophy are studied during the Fall and Winter terms, and Organic Chemistry during the Spring term.

In *Analytical Chemistry*, facilities are provided for systematic instruction in qualitative analysis, and for general practice in experimental work. Members of the class are supplied with the necessary apparatus and chemicals, and are required to spend from one to two hours daily in the laboratory. The course includes the preparation of some of the more important gases and salts, and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are, from time to time, given to test the progress of the student in his work. During the Spring term special attention is directed to some of the more important medical preparations and to the analysis of waters; and an elementary course in quantitative work is added.

Students who have completed the course in General Chemistry in the University are admitted to this class without examination. All other applicants will be required to pass an examination on the matter contained in any elementary work on the subject named.

English.

PROF. REYNOLDS.

The course in this school includes the subjects named below, and is arranged for two years, as follows:

JUNIOR CLASS.

First term—Introduction to English philology, or exercises in Historical, Etymological and Phonetic analysis of the English language.

Second term—History and development of the English language, and exercises in logical analysis and English constructions.

Third term—First principles of Political Economy, and an introduction to the study of English literature.

SENIOR YEAR.

First term—Introduction to and exercises in literary criticism.

Second term—Study of representative authors in different departments of English literature.

Third term—Political Economy, and the discussion of leading practical questions in social science.

Instruction is given by text books, lectures, exercises and reference to good authorities.

The requirements for entering the Junior Class are, a certificate of promotion in the English branches taught in the Preparatory Department of the University, or evidence of having taken an equivalent course elsewhere.

The requirements for entering the Senior Class, are promotion in the Junior Class, and also promotion in the School of Rhetoric, or satisfactory equivalents for such promotions.

School of Biology.

PROF. HARTIGAN.

The course of study in this school requires two years. In the first year, Zoology and Structural Botany are studied, and in the second, Human Anatomy, Physiology and Hygiene.

FIRST YEAR—ZOOLOGY AND STRUCTURAL BOTANY.

Fall and Winter terms—Zoology is studied during these terms. In the Fall term, Comparative Zoology is considered, while the Winter term is devoted to the study of Systematic Zoology and Histology. Each student in this branch (except candidates for the degree of Bachelor or Arts of Master of Arts) is required to skeletonize five vertebrate animals; and all students are required to prepare, cut, stain and mount for microscopical examination, a certain number of specimens of the various animal tissues.

Text-books in Zoology. Orton, Packard, Claus; and the works of Darwin, Haeckel and Spencer for reference. In Histology, Klien, Stricker, Shafer, Cornie and Ranvier.

Structural Botany is also studied during the Fall and Winter terms, the class reciting twice a week. The General Anatomy and Physiology of plants will first be studied, and then the special Anatomy and Physiology of plant tissue, together with the microscopical examination of these, and practical work in Bacteriology.

Text-books and books of reference. Bessey's Structural Botan ;

Gray, Sachs, Bently, Cooke, Crookshank's Bacteriology, Dawson's Geological History of Plants.

SECOND YEAR---ANATOMY, PHYSIOLOGY AND HYGIENE.

Fall and Winter Terms.—Five lectures are given weekly on General, Descriptive and Surgical Anatomy, during the Fall and Winter terms. While each lecture on this branch of Anatomy will be fully illustrated by models, charts, specimens, manikins and every other means tending to impress the facts upon the student's mind, the skeleton or cadaver will furnish the proper text of every lecture.

Practical Anatomy—As a thorough knowledge of Anatomy can only be obtained by dissecting, every student in this branch of Anatomy is required to dissect at least one part of a subject one term. This constitutes a full course of dissection, and will be certified to by the demonstrator in charge, after the student has passed a satisfactory examination on the parts dissected. The dissecting room of the University is large, thoroughly equipped, well ventilated and lighted, and is heated by steam, so that any desired temperature can be maintained, thus preventing the freezing and thawing of subjects during the colder months, which is so detrimental to their usefulness.

This room will be open four nights in the week, from 7 till 10 o'clock during the Fall term, and from 6 till 9 o'clock during the Winter term. A demonstrator will be present each night. Material for dissection is furnished free.

NOTE.—Candidates for Bachelor's degrees are required to take the course in general anatomy only. Candidates for Master of Sciences, and those intending to study medicine, take also the course in Practical Anatomy.

Text Books, &c. Gray, Wilson, Quain, Allen's Dissector, Holden's Manual.

Spring Term.—Physiology is studied during the Spring term, including five lectures every week. The consideration of the Physiology of each organ will be preceded by lectures on its minute anatomy. The study of this branch will be facilitated by diagrams and charts and the use of the microscope, and by experiments upon inferior animals. Instruction in the Practical Analysis of Urine, and in the miscroscopical examination of Urinary deposits and the different fluids of the body will be given in the course. Hygiene will be considered in connection with Physiology.

Text books and books of reference, Flint's Human Physiologyy, Yeo's Manual, Kirke, Dalton, Carpenter, Foster.

In Hygiene, Parke's, Huxley and Youman, Wilson.

Mathematics.

E. S. Avis, *2nd Lieut. 5th U. S. Infantry.*

The course of instruction in the School of Mathematics consists of three years.

JUNIOR YEAR.

First Term.—Trigonometry, Elements of Surveying.
Second Term—Analytical Geometry.
Third Term—Descriptive Geometry.

INTERERMEDIATE YEAR.

First Term—The Calculus.
Second Term—The Calculus, Analytical Mechanics.
Third Term—Analytical Mechanics.

SENIOR YEAR.

First Term—Analytical Mechanics.
Second Term—Analytical Mechanics, Astronomy.
Third Term—Astronomy.

The third term of the junior year is not required of candidates for the degree of Bachelor of Arts. During that term these candidates may take practical surveying as an optional study in the Department of Engineering.

Students take the course in Mathematics to prepare themselves for the higher Mathematics, for the applications of Mathematics, or to obtain that mathematical training of the mind, which is acknowledged to be of great value. Therefore students will be presumed to be actuated by an earnest desire to master the elements of the science, or to improve their minds, and while they will be assisted with all necessary explanations, they will be required to study. The text books have been carefully selected with this view.

Students are required to pass an examination in University Algebra and Geometry, in order to enter the Junior year in this school.

VOCAL MUSIC.

PROF. PURINTON.

An optional course in vocal music is offered to students who wish instruction in this art. The class meets twice a week (Tuesday and Thursday).

The Course of Instruction embraces one year, as follows:

Fall Term---Rudiments and Elementy Practice.

Winter Term---Rudiments continued, Glee and Chorus Singing.

Spring Term---Lectures on Harmony and Composition. Theory of Music and Musical Form, with original exercises in Harmony and Composition.

STUDENTS 1888–9.

Allen, R. E. L.
Burley, J. L.
Clayton, V. G.
Davis, J. H.
Gore, C. W.
Harman, M. C.
Jolliffe, W. S.
Markey, J. N.
Peck, J. E.
Reynolds, W. F.
Shaffer, P. A.
Sheppard, A. H.
Snyder, E. E.
Stoetzer, H. G.
Thayer, A. L.
Trotter, J. R.
Warren, E. L.
Westenhaver, E. S.

THE MILITARY DEPARTMENT.

FACULTY AND INSTRUCTORS

E. M. TURNER, LL. D.,
President.

E. S. AVIS, Second Lieut. 5th Infantry, U. S. A.,
Professor of Military Science and Tactics.

Cadet Captain H. G. STOETZER,
Instructor in Infantry and Artillery Tactics.

Cadet Captain J. E. BROWN,
Instructor in Infantry and Artillery Tactics.

Cadet Captain L. A. LINDEMUTH,
Instructor in Infantry and Artillery Tactics.

Cadet First Lieut. and Adjutant J. E. DAWSON,
Instructor in Signaling.

Cadet First Lieut. J. A. JACKSON,
Instructor in Saber Exercise.

Cadet Second Lieut. P. A. SHAFFER,
Instructor in Artillery Tactics.

COURSE OF INSTRUCTION

IN THE

MILITARY DEPARTMENT.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to the Regent of the district in which the young man lives. The application should set forth the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The commandant of Cadets, or the President, will be glad to answer any inquiry on the subject.

The following table will show the counties composing the several districts; the names of the Regents are prefixed to this catalogue:

District I. Hancock, Brooke, Ohio.
District II. Marshall, Wetzel, Marion.
District III. Ritchie, Doddridge, Harrison, Gilmer, Calhoun.
District IV. Tyler, Pleasants, Wood, Wirt.
District V. Mason, Jackson, Roane.
District VI. Putnam, Cabell, Wayne.
District VII. Lincoln, Boone, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII. Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX. Kanawha, Clay, Nicholas, Braxton, Webster.

District X. Lewis, Randolph, Upshur, Barbour, Taylor, Tucker.
District XI. Preston, Monongalia.
District XII. Hampshire, Hardy, Grant, Mineral, Pendleton.
District XIII. Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All cadets are enlisted for not less than two, nor more than five years, and are not permittted to resign before the expiration of the two years, except for cause. Drill occupies one hour on each of four days in the week. A neat uniform of cadet gray is worn. The cap, trousers and blouse, or drill coat, constitute the uniform. A vest, which is no part of the uniform, will not be worn. Cadets will keep this in view when joining. Insignia of rank are worn on the blouse, and on the dress coat; straw hats can be worn in summer, when not on military duty. Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term. The University has an ample equipment for both infantry and artillery and is supplied with ammunition by the Ordnance Department U. S. Army.

The annual course in drill for the corps is as follows:

Infantry—Schools of the Soldier, Company and Battalion, including Bayonet Exercise, Skirmish Drill and Target Practice.

Artillery—Manual of the Piece.

Cavalry—Manual of the Sabre, Dress Parades, Reviews, Inspections and Guard Mountings are held at proper times.

Signaling—Use of the Flag.

Lectures on Military subjects, including Customs of Service, Organization of Armies, Strategy and grand Tactics, Military Engineering, Heavy Ordnance, Explosive Compounds, Torpedoes, Military Campaigns, &c., are delivered during the year to the members of the corps.

The officers and the non-commissioned officers are required to exercise the command, and to perform the duties of their offices as is the case with the corresponding officers and non-commissioned officers in the regular army. Cadets of the graduating class are required at proper times, to exercise the command and to perform the duties of commissioned officers.

The Chief Signal officer U. S. army has been kind enough to allow four practice kits and sufficient instruction cards, and signaling with the flag will be taught.

Roster of Corps Cadets.

E. S. Avis, *2nd Lieut. 5th U. S. Infantry, Commandant Cadets.*

BATTALION STAFF.

Dawson, J. E., First Lieut. and Adjutant.
Jackson, J. A., First Lieut. and Ordnance Officer.
Lazzell, J. E., Second Lieut. of Artillery.

NON COMMISSIONED STAFF.

Peck, J. E., Sergeant Major.
Roemer, J. L., Quartermaster Sergeant.
Hayes, U. S. G., Ordnance Sergeant.

DRUM CORPS.

Dawson, J. E., First Lieut. and Adjutant Commanding.
Bane, B. T. Tenor Drum.
Lazier, A. M., Fifer.
Cornwell, W. B., Bass Drum.

COLOR GUARD.

Heiner, G. G., Color Seargeant.
Clark, F. W., Color Corporal.
Post, M. D., Color Corporal.
Grier, J. A., Color Corporal.

Company A.	Company B	Company C.
CAPTAINS.		
Stœtzer, H. G.	Brown, J. E.	Lindemuth, L. A.
FIRST LIEUTENANTS.		
orpenning, G. B.	Rankin, Chas.	Jackson, J. A.

SECOND LIEUTENANTS.

Company A.	Company B.	Company C.
Shaffer, P. A.	Reynolds, W. F.	Woodson, E. E.

FIRST SERGEANTS.

Beamer, E. H.	Jolliffe, W. W.	Reynolds, F. C.

SERGEANTS.

Ross, F. G.	Lynch, T. D.	Sivey, W. M.
Coffman, C. C.	Francis, J. W.	Sisler, C. B.

CORPORALS.

Lemley, C. Mc. C.	Smith, E. G.	Duvall, C. R.
Musgrave, W. E.	Ross, R. H.	Vickers, E. H.
Meyer, W. C.	Snyder, S.	Stifel, H. G.
Alexander, G. M.	Smith, A. B.	Hamilton, W. A.

General Roster of State Cadets.

Those marked (g) belong to the graduating class of this year.

DISTRICT I.—J. B. SOMMERVILLE, REGENT.

	Name.		County.	When Enlisted.	Status.
1	Stoetzer, H. G.,	(g)	Ohio,	Sept. 4, 1884,	Present.
2	Lindemuth, L. A.,	(g)	Ohio, *Brooke,	Sept. 2, 1885,	"
3	Roemer, J. L.,	(g)	Ohio.	Sept. 2, 1886,	"
4	Heiner, G. G.,	(g)	Jefferson, *Ohio,	Nov. 2, 1886,	"
5	Meyer, W. C.,		Ohio,	Aug. 31, 1887,	"
6	Hughes, J. E.,		Ohio,	Aug. 31, 1887,	"
7	Bane, Boyd T.,		Brooke,	Aug. 31, 1887,	"

One vacancy.

LOSS.

1	Arbenz, John P.,	Ohio, *Brooke,	Oct. 7, 1887,	Disch'd May 30, 1888
2	Crawford, R. M.,	Ohio, *Hancock,	Sept. 1, 1885,	Disch'd June 4, 1888

*County to which accredited.

DISTRICT II—CLARENCE L. SMITH, REGENT.

	Name.	County.	When Enlisted.	Status.
1	Rankin, Charles.	Marshall,	March 16, 1886,	Present.
2	Francis, J. W.,	Marshall,	Nov. 13, 1886,	"
3	Clark, F. W.	Wetzel,	Nov. 13, 1886,	"
4	Lemley, C. McC.,	Wetzel,	March 9, 1887,	"
5	Holbert, J. T.,	Marion,	Sept. 4, 1888,	"
6	Fear, John W.,	Marion,	Sept. 4, 1888,	"
7	White, K.,	Marshall,	Dec. 2, 1888,	"

One vacancy.

LOSS.

1 Cox, J. D., Marion, March 24, 1882, Grad. June 10, 1883.
Taylor,
2 Evans, C. W., *Marion, Aug. 31, 1887, Disch'd, Sept. 5, 1888.
3 Roemer, J. L., Transferred to First District.
4 Cooper, A. B., Transferred to Fourth District.

DISTRICT III.—PEREGRIN HAYS, REGENT.

1	Chorpenning, G. B. (g.)	Harrison,	Sept. 1, 1885,	Present.
2	Post, M. D.,	Harrison,	Sept. 1, 1886,	"
3	Lynch, T. D.,	Harrison,	Sept. 10, 1886,	"
4	Coffman, C. C.,	Harrison,	Oct. 18, 1887,	"
		Harrison.		
5	Smith, E. G.,	*Doddridge,	Feb. 24, 1888,	"
		Harrison,		
6	Price, M. McD.,	*Doddridge,	Sept. 5, 1888,	"
7	Markey, J. N.,	Doddridge,	Sept. 5, 1888,	"
		Harrison,		
8	Davis, J. H.,	*Doddridge,	Sept. 5, 1888.	"

LOSS.

1 Wolfe, U. L., Harrison, Aug. 31, 1887. Discharged Sept. 5, 1888.

DISTRICT IV—D. D. JOHNSON, REGENT.

1	Sivey, W. M.,	Wood,	Sept. 1, 1886,	Present.
2	Smith, H. W.,	Tyler,	March 8, 1887,	"
3	Grier, J. A.,	Wood,	March 15, 1887,	"
		Wood,		
4	Johnson, J. S.,	*Wirt,	Aug. 31, 1887,	"
5	Smith, S. A.,	Tyler,	Aug. 31, 1887,	"
6	Cooper, A. B.,	Wood,	Jan. 24, 1888,	"
7	Ross, R. H.,	Wood,	March 22, 1889.	"

One vacancy.

*County to which accredited.

LOSS.

1 Echols, J. S., Wood, Aug. 31, 1887, Discharged Sept. 5, 1888.
2 Matheny, J. M., Wood, Aug. 31, 1887, Resigned Oct. 3, 1888.

DISTRICT V—JOHN G. SCHILLING, REGENT.

Name.	County.	When Enlisted.	Status.
1 Reed, S. F.,	Barbour, *Roane,	Jan. 4, 1888,	Present.
2 Clark, J. B.,	Wetzel, *Jackson,	Sept. 5, 1888,	"
3 Gore, C. W.	Harrison, *Mason,	Sept. 19, 1888,	"
4 Smith, H. R.,	Harrison, *Roane,	Sept. 21, 1888,	"
5 Ramsay, R. H.,	Harrison, *Jackson,	Oct. 12, 1888,	"
6 Byrd, L. D.,	Wirt,	March 14, 1889,	"
7 Vance, C. E.,	Harrison, *Roane,	March 27, 1889,	"

One vacancy.

LOSS.

1 Gwinn, V. H., Mason, Aug. 31, 1887, Disch'd Sept 5, 1888.
2 Sebrell, F. G., Mason, *Roane, Sept. 1, 1886, " Sept. 5, 1888.
3 Flesher, Paul, Jackson, Wood. Sept. 1, 1886, Re'gd. Oct. 28, 1888.
4 Kight, F. W., *Mason, Jan. 4, 1888, Disch. March 23, 1889.

DISTRICT VI—E. A. BENNETT, REGENT.

1 Brown, J. E., (g)	Monongalia, *Putnam,	Nov. 22, 1885,	Present.
2 Musgrave, W. E.,	Mason, *Wayne,	Sept. 1, 1886,	"
3 Ferguson, L.,	Wayne,	Sept. 1, 1887,	"
4 Lambert, J. G.,	Wayne,	Sept. 7, 1887,	"
5 Thomas, Wm. G.,	Putnam,	Oct. 26, 1886,	"
6 Burdett, Wm. A.,	Cabell,	Nov. 26, 1888,	"

Two vacancies.

LOSS.

1 Morris, R. L. Putnam, Sept. 1, 1884, Disch'd. Sept. 5, 1888.
2 Neal, G. I., Cabell, March 10. 1886, " Sept. 5, 1888.
3 Mann, E., Greenbrier, *Cabell, Sept. 14, 1885, Res'd. Jan. 3, 1889.

*County to which accredited.

DISTRICT VII—W. A FRENCH, REGENT.

Name.	County.	When Entered	Status.
1 Peck, J. E.,	Logan,	Sept. 3, 1886,	Present.
	Monongalia,		"
2 Jaco, L. M.,	*Boone,	Oct. 5, 1887,	"
	Monongalia,		"
3 Ridgway, J. R.,	*McDowell,	Oct. 10, 1887,	"
	Monongalia,		"
4 Pierce, W.	*Lincoln,	Sept. 5, 1888,	"
Four vacancies.			

DISTRICT VIII—M. J. KESTER, REGENT.

1 Alderson, B. C., (g)	Monroe,	Sept. 1, 1885,	Present.
2 Beamer, E. H.,	Monroe,	Sept. 1, 1885,	"
3 Woodson, E. E.,	Fayette,	Sept. 11, 1885,	"
4 Hamilton, W. A.,	Monroe,	Aug. 31, 1887,	"
	Monongalia,		"
5 Ford, G. M.,	*Monroe,	Jan. 30, 1888,	"
6 Leach, E.,	Monroe,	Sept. 10, 1888,	"
	Harrison,		"
7 Vance, J. C.,	*Greenbri'r,	Jan. 7, 1889,	"
One vacancy.			

LOSS.

1. Huddlestun, D. E.,	Greenbrier,	Oct. 5, 1887,	Disch'd Sept. 5, 1888
	Monongalia,		
2 Harvey, C.,	*Summers,	Sept. 8, 1887,	Disch'd Sept. 5, '88
3 Moomau, E. S.,	Pocahontas,	Jan. 5, 1888,	Disch'd Mar. 15, '88

DISTRICT IX.—D. C. GALLAHER, REGENT.

1 Reynolds, W. F.,	Kanawha,	Sept. 1, 1885,	Present.
2 Cunningham, J. B.,	Kanawha,	Aug. 31, 1887.	"
	Preston,		
3 Trotter, J. R.,	*Clay,	Oct. 8, 1887.	"
4 Singleton, G. E.,	Braxton,	Sept. 4, 1888,	"
5 Calvert, W. J.,	Kanawha,	Oct. 11, 1888.	"
6 Hickman, L. P.,	Clay,	March 3, 1889.	"
Two vacancies.			

LOSS.

	Putnam,		
1 Alexander, A. S.,	*Clay,	Jan. 1, 1886,	Disch'ed Sept. 5, 1888.
	Mason,		
2 Musgrave, E. C.	*Clay,	Sept. 20, 1887,	" Sept. 5, 1888.
	Cabell,		
3 Morris, A. F.,	*Braxton,	Sept. 20, 1887,	" Sept. 5, 1888.
	Kanawha,		
4 Wells, C. A.,	*Braxton,	M'ch 15, 1886,	Resig'd Dec. 20, 1888

*County to which accredited.

DISTRICT X.—THOMAS J. FARNSWORTH, REGENT.

	Name.	County.	When Entered.	Status.
1	Hays, U. S. G.,	Barbour, Preston,	March 26, 1885,	Present.
2	Shaffer, P. A.,	*Barbour,	Sept. 9, 1887,	"
3	White, R. K.,	Taylor,	Aug. 31, 1886,	"
4	Thayer, A. L.,	Taylor,	Sept. 4, 1888,	"
5	Brannon, E. A.,	Lewis,	Sept. 7, 1888,	"
6	Martin, A. K.,	Taylor,	Oct. 10, 1887,	"
7	Ward, T. H.,	Randolph,	Oct. 11, 1888,	"
8	Mullins, L. A.,	Upshur,	Jan. 7, 1889,	"

LOSS.

1	Wees, Boyd,	Randolph, Harrison,	Mar. 10, 1886,	Disch'd	Sept. 5, 1888.
2	Maxwell, F. P.,	*Lewis,	Nov. 10, 1886,	"	Sept. 5, 1888.
3	Teter, D. P.,	Barbour,	Aug. 31, 1886,	"	Sept. 5, 1888.
4	Mullens, L. A.,	Upshur,	Aug. 31, 1887,	"	Sept. 5, 1888.

DISTRICT XI.—JOSEPH MORELAND, REGENT.

1	Lazzell, J. E.,	Monongalia,	Sept. 5, 1883,	Present.
2	Jackson, J. A., (g)	Preston,	Sept. 1, 1886,	"
3	Alexander, G. M.,	Monongalia,	Sept. 1, 1886,	"
4	Jolliffe, W. W.,	Monongalia,	Dec. 9, 1886,	"
5	Wiles, J.,	Preston,	Sept. 8, 1887,	"
6	Garlow, E. C.,	Monongalia,	Nov. 4, 1887,	"
7	Lazier, A. M.,	Monongalia,	Sept. 5, 1887,	"

One vacancy.

LOSS.

1	Jamison, D. L.,	Monongalia,	Sept. 5, 1883,	Grad. June 13, 1888
2	Orwen, R. L.,	Preston,	Sept. 1, 1886,	Disc'd. May 17, 1888

DISTRICT XII—JOHN A. ROBINSON, REGENT.

1	Reynolds, F. C.,	Mineral,	March 10, 1886,	Present.
2	Minshall, F. M.,	Mineral,	Aug. 31, 1887,	"
3	Suter, J. E.,	Mineral, Preston,	Aug. 31, 1887,	"
4	Paul, J. W.,	*Pendleton,	Jan. 23, 1888,	"
5	Brady, I. P.,	Hampshire, Monongalia,	Sept. 5, 1888,	"
6	Allender, C. R.,	*Hampshire, Monongalia,	Jan. 1, 1889,	"
7	Bayles, C. N.,	*Hardy,	April 3, 1889,	"

One vacancy.

*County to which accredited.

LOSS.

	Name.	County.	When Entered.	
1	McIntyre, U. G.,	Mineral,	March 15, 1886,	Disch'd Sept. 5, '88
2	Stallings, A. R.,	Grant,	Sept. 1, 1886,	Disch'd Sept. 5, '88
3	Fredlock, W. H.,	Mineral,	Aug. 31, 1887,	Disch'd Sept. 5, '88
4	Keys, C. F ,	Mineral, *Pendleton,	Aug. 31, 1887,	Disch'd Sept. 5, '88

DISTRICT XIII.—W. W. BROWN, REGENT.

1	Sisler, C. B.,	Monongalia, *Morgan,	Sept. 1, 1886,	Present.
2	Duvall, C. R.,	Berkeley,	Aug. 31, 1887,	"
3	Vickers, E. H.,	Jefferson,	Aug. 31, 1887,	"
4	Snyder, Sampson, Jr.,	Randolph, *Morgan,	Oct. 18, 1887,	"
5	McQuilkin, W.,	Jefferson,	Sept. 5, 1888,	"
6	Westenhaver, E. S.,	Jefferson,	March 15, 1888,	"
7	Tabler, H. H.,	Berkeley,	Sept. 11, 1888,	"
8	Hanshaw, E.,	Wetzel, *Morgan,	Dec. 4, 1888,	"

LOSS.

1	Emmert, H. H.,	Berkeley,	Sept. 5, 1884,	Grad. June 9, 1888
2	Byrnes, J. E ,	Berkeley,	Aug. 31, 1887,	Disch'd Sept. 5, 1888

VOLUNTEERS.

1	Dawson, J. E., (g)	Uniontown, Pa.,	Sept. 5, 1885,	Present.
2	Ross, F. G.,	Dunkard, Pa.,	March 8, 1887,	"
3	Hansford, M. M.,	Fayette Co.,	Aug. 31, 1887,	"
4	Stifel, H. G.,	Wheeling,	Sept. 21, 1887,	"
5	Henderson, H. L.,	Monongalia Co.,	Sept. 7, 1888,	"
6	Smith, A. B.,	Fayette Co., Pa ,	Sept. 10, 1888,	"
7	Beard, H. L.,	Pocahontas Co.,	Sept. 19, 1888,	"
8	Cornwell, W. B.,	Hampshire Co.,	Sept. 25, 1888,	"
9	Joliffe, W. S.,	Monongalia Co.,	Dec. 11, 1888,	"
10	Echols, J. S ,	Wood Co.,	March 19, 1889,	"

LOSS.

1	Brown, R. C.,	Monongalia Co.,	Sep. 9, 1886,	Disch'd Sep. 5, 1888
2	Stifel, E. W.,	Wheeling,	Oct. 12, 1885,	Disch'd June 9, 1888
3	Kerr, W. W.,	Upshur Co.,	Sept. 9, 1887,	Disch'd Mar. 15, 1888
4	Woodmansee, H. T.,	Wheeling,	Jan. 4, 1888,	Disch'd May 30, 1888
5	Schreiber, O. T.,	Wheeling,	Jan. 4, 1888,	Disch'd Sept. 5, 1888
6	Bayles, C. N.,	Monongalia Co.,	Jan. 4, 1888,	Disch'd June 10, '88

7 Thomas, William G., appointed cadet Sixth District.
8 Lazier, A. M., " " Eleventh District.
9 Pierce, Warren, " " Seventh District.

County to which accredited.

THE DEPARTMENT

OF

CIVIL AND MINING ENGINEERING.

FACULTY.

E. M. TURNER, LL. D., PRESIDENT.
Professor of Rhetoric.

T. M. JACKSON,
Professor of Civil and Mining Engineering.

JOHN I. HARVEY, A. M.,
Professor of French.

I. C. WHITE, PH. D.,
Professor of Geology and Mineralogy.

A. R. WHITEHILL, A. M.,
Professor of Chemistry and Physics.

P. B. REYNOLDS, A. M.,
Professor of English.

COURSE OF STUDY

IN THE

DEPARTMENT OF CIVIL AND MINING ENGINEERING.

This department was established in 1888, by the election of Colonel Thomas M. Jackson, to the Chair of Civil and Mining Engineering. The object of this department is to furnish along with other necessary studies, a thorough and complete course of training and practical work for the profession of Engineering. To enter this course of study, the student, if intending to apply for the degree of Civil Engineer, must have completed the course of study of the Preparatory Department of the University, or its equivalent, except Greek.

DEGREE OF CIVIL ENGINEER.

The course of study for the degree of Civil Engineer is distributed over a term of four years, and includes the following subjects in the Collegiate Department, in addition to the engineering studies proper: Mathematics, Physics, Chemistry, (general and analytic), Geology and Mineralogy, French, Rhetoric, and the Junior year of the English course.

Civil and Mining Engineering Course.

Following is the course of study required for the degree of Civil Engineer:

FIRST YEAR.

Physics, Junior French, Junior Mathematics, Engineering (Drawing, &c., Surveying.)

SECOND YEAR.

Intermediate Mathematics, Senior French, Geology and Mineralogy, Rhetoric, Chemistry, Engineering, (Railroad Surveying, &c., topographical drawing, &c.)

THIRD YEAR.

Analytical Chemistry, Junior English, Senior Mathematics, Engineering, (Railroad Location, Mine Surveying, &c.)

FOURTH YEAR.

Engineering, (Bridging, Tunneling, Mine Engineering, Hydraulic, Geodetic and Sanitary Engineering, &c.) A written thesis will be required, in the 4th year, of all candidates for the degree of Civil Engineer.

To enter this course the student should have completed the course of study in the Preparatory Department, or its equivalent, except Greek.

Announcement of the Professor of Civil and Mining Engineering.

PROF. JACKSON.

The course of study in the School of Engineering proper, will cover four years, distributed as follows:

FIRST YEAR.

1. Free hand Drawing; Lettering; Lineal, and Architectural Drawing; Sketching and Water Colors.

Text and Reference Books.—Warren, Copley, Esser, Soennecker.

2. Surveying, Mapping and Field Work.

Text and Reference Books—Johnson, Dorr, Bellows and Hodgman, Kean.

SECOND YEAR.

Railroad Surveying, Leveling and Engineering proper; Road-making, Earthwork; Foundations and Masonry; Drawing, topographical and lineal; Field Work.

Text and Reference Books.—Searles, Shunk, Henck, Trautwine, Gilmore, Morris, Wellington, Smith.

THIRD YEAR.

Railroad Location, Mine Surveying, Topographical Surveying, Masonry, Cements, Stone Cutting, Strength of Materials, Graphics, Drawing, Field Work.

Text and Reference Books.—Wellington, Hyslop, Gilmore, Dobson, Tuthill, Wood, Green, Haupt.

FOURTH YEAR.

Bridge Engineering, Tunneling, Mine Engineering, Hydraulic Engineering, Geodetic and Sanitary Engineering, Designing of Engineering Works, Economics of Engineering, Thesis work, Field practice.

Text and Reference Books.—Rankine, DuBois, Latham, Tanning, Francis, Philbrick, Tredgold.

Students who have completed the first year of the general course of study required for the degree of Civil Engineer, may be allowed to take the first two years of the purely Engineering studies together, thus gaining one year in the course. The Professor will, however, fully test the qualifications of such applicants before allowing this privilege.

As many of the young men who enter college are prevented from completing the course and taking a degree, it is intended in the school of Engineering to make practical application of theory as the course proceeds. Thus it is expected that a student who can take only the first year of the Engineering course will be a thorough master of the practical details of surveying, able to do any of the work required of an official county surveyor, such as identifying lines, mapping and locating surveys from papers, preparing jury maps in legal controversies concerning land; in short, thoroughly qualified as a practical surveyor.

At the end of the second year of the Engineering course the student is expected to be able to act as "instrument man" in an Engineering corps; and so through the third and fourth years, giving such practical work in the application of engineering theory as will enable the student to take hold at once, and become a bread winner without further experience in learning the fundamental practice of his profession.

Students who do not expect to apply for a degree may take such studies in the school of Engineering as they may be prepared for, as far as the arranged schedule of recitations may permit.

SCHEDULE OF RECITATIONS—ENGINEERING COURSE.

Day.	Year.	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.	3:30 P. M.
MONDAY.	1 2 3 4	Physics Inter. Math. Engineering.	Junior French. Engin & Geol.* Analyt. Chem.	Junior Math. Rhetoric Engineering.	Drawing &c., Chemistry. Jun. English.	
TUESDAY.	1 2 3 4	Engineering.	Junior French. Engin. & Geol.* Analyt. Chem.	Junior Math. Senior French. Engineering.	Drawing. &c. Chemistry. Jun. English.	Senior Math.
WED'DAY.	1 2 3 4	Physics. Inter. Math. Engineering.	Junior French. Engin. & Geol.* Analyt. Chem.	Junior Math. Senior French. Engineering.	Drawing, &c. Jun. English.	
THURS.	1 2 3 4	Engineering.	Junior French. Engin & Geol.* Analyt. Chem.	Junior Math. Senior French. Engineering.	Drawing, &c. Chemistry. Jun. English.	Senior Math.
FRIDAY.	1 2 3 4	Physics. Inter. Math. Engineering.	Junior French. Engin. & Geol,* Analyt. Chem.	Junior Math. Rhetoric. Engineering.	Drawing, &c. Chemistry. Jun. English,	

Field Work in Engineering in the afternoon whenever practicable throught the course.
*Geology during the spring term

THE LAW DEPARTMENT.

FACULTY

OF THE

LAW DEPARTMENT.

E. M. TURNER, LL. D., PRESIDENT.

ST. GEORGE T. BROOKE,
Professor of Common and Statute Law.

WILLIAM P. WILLEY, A. M.,
Professor of Equity Jurisprudence and Mercantile Law.

COURSE OF STUDY

IN THE

LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of Law in any part of the United States.

It aims to make not merely *theoretical*, but *practical* lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Law is conferred upon graduates in this department. By recent act of the Legislature graduates of the University Law School are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statue Law, Constitutional and International Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleadings and Practice.

Common and Statute Law, &c.

PROF. ST. GEORGE T. BROOKE.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stehpen on Pleading, Williams on Real Property, 1st Greenleaf on Evidence; and for *reference* the Code of West Virginia, and subsequent Acts of the West Virginia Legislature.

The text-book will be supplemented by lectures each week, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law, as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-book used in Constitutional Law will be the "Fœderalist." This, however, will be supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions, will also be the subject of lectures.

The text book used in International Law will be Woolsey's Introduction to the Study of International Law.

Equity Jurisprudence, Mercantile Law, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text books are Adams' Equity and Smith's Mercantile Law, with *reference* to Parsons, Story, and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisprudence;

Some special heads of Equity Jurisprudence:

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the law relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, &c.; Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

Terms and Topics.

Three terms constitute the school year, and the entire course of instruction is covered by the lectures within the year, thus enabling the student to complete the course and become a candidate for graduation at the end of that period. A majority of the students do so; but it is optional with the student to give one year or two to the course. This must be determined by the degree of culture and the qualifications of the student when commencing the course. Many students prefer to take two or three branches of study in the Academic Department in connection with their law studies and divide the law course into two years, which is always advisable if the student is deficient in general culture.

As one term is not much dependent upon another as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter at the beginning of the Fall term if possible.

The work of the year is divided among the three terms, as follows:

FALL TERM.

Rights of Persons and Things--Blackstone. International Law. Common Law Pleading. Evidence.	PROF. BROOKE.
Equity Pleading. Contracts. Negotiable Instruments.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. International Law. Blackstone, 1st and 2nd books (continued.) Blackstone, 3d and 4th books (begun.)	PROF. BROOKE.
Agency. Partnership. Suretyship and Guaranty. Practice in the Courts. Equity--Accidents, Mistakes, Frauds, &c.	PROF. WILLEY.

SPRING TERM.

Constitutional Law (continued.) Criminal Law, &c., Blackstone, 3d and 4th books (continued.) Real Property.	PROF. BROOKE.
Bailments. Corporations. Practice in the Courts. Insurance. Equity.	PROF. WILLEY.

Methods of Instruction.

The methods of instruction consist of Lectures and Examinations from approved text books read in course; the drawing of the various legal papers requisite in the ordinary practice of the law; and Moot Courts.

Each day before the lecture, there will be an oral examination on the subject of the lecture of the preceding day, and of such portions of the text books as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed and for candidates for graduation a review examination on the entire course. They will all be in writing.

Moot Courts.

However familiar the student may be with the text books and with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In this they are taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleadings, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the arguments, charge, verdict, motion in arrest of judgment, writ of error, &c. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the bar as gentlemen as well as lawyers.

Requirements for Admission and Degrees.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures. If, however, the person applying for admission intends to be a candidate for the degree of Bachelors of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

In September of each year an examination in the ordinary English branches will be held by the two law Professors and the President of the University, of all students who are candidates for the degree of Bachelor of Laws during that year. Any student found deficient at this examination will be required to pursue those branches in the classes of the University, in connection with his law studies. The examination will include the correct writing of ordinary English.

The degree of Bachelor of Laws will be conferred only upon those who are able to pass a rigid examination upon the entire course. The value of a diploma from this department will never be impaired by conferring it where it is not merited and has not been fairly won.

No degree will be conferred on any student who has not been in attendance upon the lectures for at least nine months,

Expenses.

The tuition fee in the Law Department is $8.00 per term.

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

A summary of the expenses of boarding, &c., as given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Cost of Books.

The text books essential to the successful prosecution of the work of the law school are the following: namely, Blackstone's commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence (Vol. I.), Smith's Mercantile Law, Adams' Equity, The Federalist, Woolsey's Constitutional Law.

The cost of these books, if purchased new, is about $30.00. They can be obtained "second-hand" at from $12 to $15.00. Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

Private Summer Course of Law Lectures to commence June 13th, 1889, and continue eight weeks.

It is believed that these lectures will prove especially profitable to two classes of young men, viz:

Those who propose ultimately to attend a full course of law lectures at the West Virginia University, or elsewhere; and those who, not having the time or the means to attend a full session of a Law School, must pursue their studies privately.

It is also believed that eight weeks of systematic instruction from one who has now had ten years of experience as a law-teacher will prove of more advantage to the student than a very much longer period of "reading" with a lawyer who pays little or no attention to his pupil.

The location of the West Virginia University for a summer course of study is peculiarly favorable; it is accessible by railroad, and the climate exceptionally healthful in summer.

The subjects embraced in these lectures will be the rights of persons and of property, and the elementary principles of Pleading and of Practice.

No text-books except Blackstone's Commentaries required; Warth's latest Code desirable as a book of reference.

TERMS—$20, strictly in advance, for the entire course. For further particulars apply to

PROF. ST. GEORGE T. BROOKE.

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be overestimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course; the active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining; and it produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

Any information relative to this department will be cheerfully given in reply to inquiries.

GRADUATES IN LAW, 1888.

Charles A. Clark,
Alexander Dupuy,
Melville H. Fleming,
Lewis C. Lawson,
Robert K. McComb,
Addison F. Morris,
George I. Neal,
Ulysses S. G. Pitzer,
Thomas R. Shepherd,
Thomas J. Woofter.

THE PREPARATORY DEPARTMENT.

FACULTY.

E. L. TURNER, LL.D., PRESIDENT,
Instructor in Rhetoric.

A. W. LORENTZ, A. M., PRINCIPAL,
Instructor in Latin and Book-keeping.

JAMES S. STEWART, M. S.,
Assistant Professor and Instructor in Mathematics.

EDWARD S. ELLIOTT, A. B.,
First Assistant Instructor.

J. E. BROWN,
A. J. HARE,
H. G. STOETZER,
Student Assistants.

PREPARATORY DEPARTMENT.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. The Preparatory Department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity for this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed without lowering the standard of collegiate study proper, or shutting out from the advantages of the University many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

Course of Study.

The course of study in the Preparatory Department aims to prepare young men for admission to the higher classes in the University, and to fit those who do not desire to take the full course for the business of life.

Candidates for entrance should be at least fifteen years old and should have *thoroughly* accomplished the ordinary course of study in the common schools of the State.

No special examinations is required for entrance into the classes of the Preparatory school. Students are classed according to their apparent advancement, and are admitted *on trial* for the first term. The following rule has been adopted on this subject by the Faculty :

All students in the first preparatory studies, who fail to make an *average standing* of 6 on a scale of 10. at the examination at the close of the first (or Fall) term, shall be dropped from the school; and all in the second preparatory classes who fail to make an average of 6 *in any study* at the end of the first (or Fall) term, shall be required to go into the first preparatory class in such study.

Junior Year.

FALL TERM.

Arithmetic—Greenleaf's Complete--From Common Fractions to Discount.....5 hours a week
English Grammar--(Swinton)—Etymology.....5 hours a week
Latin (commenced).....5 hours a week

WINTER TERM.

Arithmetic (completed).....3 hours a week
Eng. Grammar--Syntax and English Comp.....5 hours a week
Latin--Grammar and Reader—Chase & Stuart...5 hours a week
Algebra—Well's Academic—To Fractions.....2 hours a week

SPRING TERM.

Algebra--Well's Academic (completed).....5 hours a week
Eng. Grammar--Anal., Pros., and Eng. Com.....5 hours a week
Latin—Grammar and Reader.....5 hours a week

Note—Students in the Junior year of the Preparatory are not allowed to take any other studies than the above.

Senior Year.

FALL TERM.

Algebra—Wells' University—Fractions to Imaginary Quantities..... 2 or 3 hours a week
Cæsar (two books)--Latin Grammar.....5 hours a week
Greek—Grammar and Reader. (Goodwin).....5 hours a week
Geometry—Wells'—Books 1 and 2.....3 or 2 hours a week
Book-keeping.....3 hours a week

WINTER TERM.

Algebra, Imaginary Quantities to Binomial Theorem.....2 or 3 hours a week
Cicero's Orations (three orations)—Chase and Stuart's Grammar.....5 hours a week
Greek—Grammar and Reader.....5 hours a week
Geometry, Books 3, 4 and 5.....3 or 2 hours a week
Book-keeping(completed).....3 hours a week

THIRD TERM.

Algebra (completed)	3 or 2 hours a week
Geometry (completed)	2 or 3 hours a week
Virgil—Three Books of Æneid; Latin Grammar	5 hours a week
Xenophon's Anabasis (two books), Greek Gram.	5 hours a week
English Composition, Punctuation, &c.	3 hours a week

Note—Candidates for the degree of Bachelor of Sciences are not required to take Greek. Candidates for the degree of Bachelor of Arts are not required to take Book-keeping.

Normal School Certificates.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University. Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the Principal of the school, to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

Approved High Schools.

In order to secure the higher usefulness of the West Virginia University to the young men of the State, as well as to encourage the establishment of high schools and academies in the various sections and counties thereof, the Faculty of the University have adopted the following plan which they submit for the consideration of those interested in the work of higher education in this State.

It is confidently believed that this scheme, if generally encouraged, will, in a few years, result in the establishment of good preparatory schools and academies in various parts of the State, where not only many of those who will go to the University may get their preparatory training at less expense, but also many teachers in the primary schools will be enabled to get that additional knowledge and training so necessary to the successful prosecution of the work of primary teaching. Thus the whole public school system may be elevated and sustained on a high plane, and the expenditure for public school instruction made productive of better results than can be attained under existing circumstances. The plan is as follows:

Any high school, graded school or academy may be approved

by the West Virginia University as a preparatory school by complying with the following conditions:

1st. By establishing, in addition to the usual primary and grammar grades, a course of study the same as that pursued in the Preparatory Department of the University, or its equivalent, under the instruction of competent teachers.

2d. By making application to the Faculty of the University for a visiting committee to examine the methods and work of such school for the purpose of ascertaining the character of the instruction given.

3d. Upon such application a committee of the Faculty, not exceeding two in number, will be appointed to visit such school, and upon favorable report from such committee the Faculty will approve such school as a preparatory school for a term of four years. The expenses of the committee will be paid, one half by the University, the other half by the school making application.

4th. This approval will entitle the students who complete the prescribed preparatory course of study in such school, to enter the Collegiate Department of the University without examination, upon the certificate of the Principal of such school that students have, within the fifteen months next preceding their coming to the University, completed the course and passed an examination thereon with a standing of 7 in a scale of 10.

5th. The Faculty reserve the right to withdraw such approval if, after the admission of students, the character of the work done at such school shall be found to be below the standard required for admission to the University classes, or if certificates are given to students, who, having been found deficient after their admission, can not pass a fair test examination in the prescribed courses of preparatory studies.

6th. At the expiration of the term of four years, the approval may he renewed upon application, if the work previously done has been satisfactory.

A list of the schools approved by the University will be published from time to time in the annual catalogue.

The co-operation of those interested in the work of higher education, who believe in building up our own institutions, is earnestly solicited in developing and encouraging this scheme.

The following schools have been approved under this plan:

Linsly Institute, Wheeling; Parkersburg High School (except Greek); Western Pennsylvania Classical and Scientific Institute, Mount Pleasant, Pa.; Normal and Classical Academy, Buckhannon, W. Va.

GENERAL CATALOGUE OF STUDENTS.

[NOTE—In designating the departments in which students are studying the following abreviations are used: Prep.—Preparatory; Coll.—Collegiate; Engin.—Engineering.]

Name,	Residence.	Classes
Alderson, Bernard Calvin	Alderson, Monroe co	Coll.
Alexander, George Milton	Randall, Monongalia co	Coll.
Allen, Robert E. Lee	Lima, Tyler co	Prep. and Col.
Allender, Clarence Roy	Morgantown	Prep.
Arbenz, John Philip	Wheeling	Prep. and Coll.
Baker, Alfred Leander	Wayne C. H	Prep. and Coll.
Bane, Frank Boyd	Short Creek, Brooke co.	Prep.
Bayles, Charles Nabors	Easton, Monongalia co	Prep.
Beamer, Erastus Houston	Pickaway, Monroe co.	Coll.
Beard, Harry Lee	Huntersville, Pocahontas co	Prep. and Coll.
Brady, Isaac Parsons	Romney, Hampshire co	Prep.
Brand, Harvey	Monongalia county	Coll.
Brannon, Edward Arnold	Weston, Lewis co	Prep. and Coll.
Brown, Frank Myrtle	Morgantown	Prep.
Brown, James Edgar	Halleck, Monongalia co	Coll.
Burdette, William Alexander	Ona, Cabell co.	Prep.
Burley, James Lindsey	Moundsville	Prep.
Byrd, Lytle	Reedy Ripple, Wirt co	Prep. and Coll.
Calvert, William Joseph	St. Albans, Kanawha co	Prep.
Chambers, Arthur Willington	Terra Alta, Preston co	Prep.
Champe, Ira P	Charleston	Prep.
Chapman, Walter Marcellus	Hartford City, Mason co	Prep.
Childers, Albert Gallatin	Dickson, Wayne co.	Prep. and Coll.
Chorpenning, George B	Clarksburg	Coll.
Clark, Frank Wells	New Martinsville	Coll.
Clark, Josephus B	New Martinsville	Prep. and Coll.
Clayton, Virgil Thomas	Newburg, Preston co.	Prep.
Coffman, Carroll Clair	Bridgeport, Harrison co	Prep. and Coll.
Cole, Gideon	Morgantown	Prep.
Cooper, Arthur Benjamin	Parkersburg	Coll.
Corbin, Jefferson D	Morgantown	Coll.
Corbly, Lawrence Jugurtha	Ripley's, Tyler co	Coll.
Cornwell, William Benton	Higginsville, Hampshire co	Law.
Cunningham, John Benedict	St. Albans, Kanawha co	Prep. and Coll.
Darby, James E	Morgantown	Coll
Davis, James Ewing	Maidsville, Monongalia co	Coll.
Davis, James Hornor	Clarksburg	Prep. and Engin
Dawson, James Evans	Morgantown	Coll.
Dorsey, George Frederick	Morgantown	Prep.
Dudding, Jerome	Winfield, Putnam co.	Prep.
Dudley, James Burdett	Parkersburg	Prep.
Duvall, Charles Raymond	Martinsburg	Coll.
Eavenson, George Penn	Morgantown	Prep.
Echart, Bruce Milton	Easton, Monongalia co	Prep.
Echols, John Samuel	Lubeck, Wood co	Prep.
Eddy, William J.	Cross Roads, Monongalia co	Prep. and Coll.
Ellis, Joseph Rolly	Newburg, Preston co	Prep.
Emmert, Howard Harbaugh	Hagerstown, Md.	Law.
Fear, John William	Hoodville, Marion co	Prep.
Ferguson, Lucien	Wayne C. H	Prep. and Coll
Finnell, Charles Newton	Morgantown	Coll.

Name.	*Residence.*	*Classes.*
Flesher, Paul	Jackson C. H.	Prep.
Ford, George Michael	Kasson, Barbour co.	Prep. and Coll.
Fortney, Lorain	Independence, Preston co	Prep. and Coll.
Francis, John Wiley	Moundsville	Prep. and Coll.
Galford, John Everett	Walkersville, Lewis co	Prep. and Coll.
Garlow, Ezra Clark	Maidsville, Monongalia co	Prep. and Coll.
Gore, Claude Webster	Clarksburg	Prep. and Coll.
Graham, Samuel Willey	Masontown, Preston co	Prep.
Gregg, Jesse Wilbur	Morgantown	Prep.
Grier, John Alexander	Parkersburg	Prep. and Coll.
Grier, William Burt	Parkersburg	Prep.
Hackney, John Milton	Morgantown	Prep. and Coll.
Hamilton, William Augustus	Monitor, Monroe co	Prep. and Coll.
Hansford, Montiville Morris	Coal Valley, Fayette co	Prep. and Coll.
Hanshaw, James Earl	Burton, Wetzel co.	Prep.
Hare, Alfred Jarrett	Grafton	Coll.
Harman, Martin Cecil	Harman, Randolph co	Prep.
Harner, Milton	Morgantown	Prep.
Hartman, Edward Thornton	Tunnelton, Preston co	Prep. and Coll.
Hartman, William Ellsworth	Eas on, Monongalia co	Prep.
Harvey, Cameron	Morgantown	Prep.
Hayes, Ulysses S. Grant	Belington, Barbour co	Coll.
Heiner, Gordon Graham	Cleveland, Ohio	Coll.
Henderson, Joseph Lindsey	Monongalia co	Prep.
Henry, Emory Marcien	Uffington, Monongalia co	Prep.
Hickman, Lanty Porter	Wattsville, Clay co	Prep.
Hite, Bert Holmes	Morgantown	Coll.
Holbert, John Thomas	Watson, Marion co	Prep. and Coll.
Houston, Hugh	Easton, Monongalia co	Prep. and Coll.
Hughes, John Ellsworth	Wheeling	Prep. and Coll.
Jackson, Alfred Despard	Clarksburg	Prep.
Jackson, Joseph	Jane Lew, Lewis co	Prep.
Jackson, James Adolphus	Kingwood	Coll.
Jaco, Lin Milton	Easton, Monongalia co	Coll.
Jacob, Elmer Forrest	Morgantown	Prep.
Joliffe, William Sherman	Morgantown	Prep.
Joliffe, Worth Worthington	Morgantown	Engin
Johnson, James Stephenson	Parkersburg	Prep.
Keener, John Florence	Morgantown	Prep.
Keyes, Charles Franklin	Keyser, Mineral co	Prep. and Coll.
Kight, Frank Walton	Parkersburg	Prep.
Kincaid, Andrew Jackson	Halleck, Monongalia co.	Prep.
Kincaid, Orion Lavel	Halleck, Monongalia co	Prep.
Knight, James William	Williamsburg, Greenbrier co	Prep.
Lambert, John Gratney	White's Creek, Wayne co	Prep. and Coll,
Lazier, Arthur Moreland	Morgantown	Prep.
Lazzell, Joseph Edson	Maidsville, Monongalia co	Coll.
Lazzell, William Hite	" " "	Prep. and Coll.
Leach, Elmer	Wolf Creek, Monroe co	Engin.
Legge, Frank	Grafton	Prep.
Lemley, Cassins Mc. Carl	Burton, Wetzel co	Engin.
Lindemuth, Louis August	Wheeling	Coll.
Lynch, Tillman Davis	Craigmoor, Harrison co	Engin.
Lynch, Waitman Elliott	" "	Prep.
Mann, Edwin	Fort Spring, Greenbrier co	Coll.
Markey, John Newton	West Union	Prep.
Martin, Andrew Kent	Phillippi	Prep. and Coll.
Matheny, John Morgan	Lubeck, Wood co	Prep.
McCay, John William	Middlebourne, Tyler co	Law.
McElroy, Milton Luther	Laurel Point, Monongalia co	Prep. and Coll.

Name.	*Residence.*	*Class.*
McNeill, Nathan Clawson	Buckeye, Pocahontas co	Law.
McQuilkin, William Thomas	Shepherdstown	Prep.
Mayer, William Charles	Wheeling	Coll.
Miller, Edgar Lee	Cassville, Monongalia co	Prep and Coll.
Minshall, Frederick Mortimer	Piedmont	Prep.
Morgan, Robert Horatio	Laurel Point, Monongalia co	Prep.
Mullins, Lyell Anthony	Buckhannon	Engin.
Musgrave, William Emmett	Maggie, Mason co	Coll.
Paul, James Washington	Newburg, Preston co	Prep. and Coll.
Peck, John Edwin	Whites' Mills, Logan co	Law.
Pell, Millard	Masontown, Preston co	Coll.
Peyton, W. Littleton Pickett	Second Creek, Greenbrier co	Law.
Pierce, Warren	Morgantown	Prep.
Pierpoint, Plinn L	Sistersville, Tyler co	Prep.
Post, Mellville Davisson	Rominos Mills, Harrison co	Coll.
Price, Marcy McDonnell	Clarksburg	Prep. and Engin.
Protyman, Francis Marion	Easton, Monongalia co	Prep
Ramsay, Robert Hudson	Clarksburg	Prep
Rankin, Charles	Moundsville	Coll.
Ray, David	Granville, Monongalia co	Prep.
Reed, Ira Err	Easton, Monongalia co	Prep. and Coll
Reed, Stewart Felix	Elk City, Barbour co	Law.
Reiner, Howard Knox	Morgantown	Prep.
Reynolds, Frank Cornelius	Keyser, Mineral co	Coll.
Reynolds, Wayland Francis	Morgantown	Coll.
Rice, Ernest Effort	Morgantown	Prep.
Ridgeway, Joel R	Laurel Iron Works, Monongalia co	Prep.
Riggle, Christian Beall	Middlebourne	Prep. and Coll.
Roemer, John Lincoln	Wheeling	Coll.
Ross, Florian Gale	Dunkard, Pa	Prep. and Engin.
Ross, John Francis	Stewartstown, Monongalia co	Prep.
Ross, Raphael Herbert	Waverly, Wood co	Prep. and Coll.
Schaffer, Phil Austin	Tunnelton, Preston co	Engin.
Shepard, Addison Hite	Reedy Ripple, Wirt co	Prep. and Coll.
Shumate, Julius Cæsar	Pipe Stem, Summers co	Law.
Sine, John Ellsworth Roscoe	Monongalia co	Law.
Singleton, George Edward	Salt Lick Bridge, Braxton co	Prep. and Coll.
Sisler, Charles Benton	Stewartstown, Monongalia co	Coll.
Sivey, Willliam Mount	Briscoe Run, Wood co	Coll.
Smell, William Abraham	Stewartstown, Monongalia co	Prep.
Smith, Andrew Brown	Uniontown, Pa	Prep. and Coll.
Smith, Edward Grandison	West Milford, Harrison co	Law.
Smith, Harry Rankin	Clarksburg	Prep.
Smith, Harry W	Ripley's, Tyler co	Prep.
Smith, Sidney Austin	Shirley, Tyler co	Prep.
Snyder, Elmer Ellsworth	Harman, Randolph co	Prep.
Snyder, Sampson, Jr	Harman, Randolph co	Prep. and Coll.
South, Robert Biddle	Holman, Monongalia co	Prep. and Coll.
St. Clair, William E	Morgantown	Prep.
Stifel, Henry George	Wheeling	Prep. and Coll.
Stoetzer, Herman G	Wheeling	Coll.
Stout, William Frank	Bridgeport, Harrison co	Engin.
Suter, John Ellsworth	Piedmont, Mineral co	Prep.
Sutton, Harry Francis	Brandonville, Preston co	Prep. and Coll.
Swan, Leroy	Middlebourne, Tyler co	Engin.
Tabler, Howard Andrew	Darksville, Berkeley co	Prep.
Thayer, Arthur Love	Grafton	Prep.
Thomas, William Josias	Red House, Putnam co	Prep.
Tompkins, William Stark	Pittston, Pa	Law.
Triplett, Leland B	New Interest, Randolph co	Law.

Name.	*Residence.*	*Classes.*
Trotter, James Russell	Aurora, Preston co	Coll.
Turley, Charles Milton	Madison, Boone co	Law.
Vance, Cyrus Earl	Clarksburg	Prep.
Vance, John Carl	Clarksburg	Prep.
Vickers, Enoch Howard	Shepherdstown	Coll.
Wade, Charles	Morgantown	Prep.
Ward, Tucker Hutton	Huttonsville, Randolph co	Coll. and Law.
Warman, Arthur	Morgantown	Prep.
Warne, William Parkison	Monongahela City, Pa	Law.
Warren, Eugene List	Wheeling	Prep. and Coll.
Wells, Charles Augustus	Charleston	Prep.
Westenhaver, Edward Sylvester	Middleway, Jefferson co	Prep. and Coll.
White, Charles Lewis	Morgantown	Coll.
White, DeWitt	Morgantown	Coll.
White, Kemble	Belton, Marshall co	Prep.
White, Prescott Cushing	Morgantown	Coll.
White, Richard Keith	Grafton	Prep.
Wiles, John William	Aurora, Preston co	Prep.
Wilson, John Franklin	Grafton	Law.
Woodson, Elmon Edwin	Beckwith, Fayette co	Coll.
Yates, Thomas G	Simpson, Taylor co	Law.
Yost, Walter Burt	Oakland, Md	Prep.
Yost, Zoath F	Wheeling	Coll. and Law.
Zearley, Edmund Lee	Point Marion, Pa	Prep. and Engin.

COUNTIES OF WEST VIRGINIA REPRESENTED.

Barbour	4
Berkeley	2
Boone	1
Braxton	1
Brooke	1
Cabell	1
Clay	1
Doddridge	1
Fayette	2
Greenbrier	3
Hampshire	2
Harrison	15
Jackson	1
Jefferson	4
Kanawha	4
Lewis	3
Logan	1
Marion	2
Marshall	4
Mason	2
Mineral	4
Monongalia	59
Monroe	4
Ohio	9
Pocahontas	2
Preston	12
Putnam	2

Randolph	5
Summers	1
Taylor	6
Tyler	8
Upshur	1
Wayne	4
Wetzel	4
Wirt	2
Wood	10
Total	188

RECAPITULATION BY STATES.

West Virginia	188
Pennsylvania	5
Maryland	2
Total	195

NUMBER IN THE SEVERAL SCHOOLS.

SCHOOL OF RHETORIC.

Junior	3
Senior	31

SCHOOL OF METAPHYSICS.

Junior	16
Senior	12

SCHOOL OF ANCIENT LANGUAGES.

Junior Latin	8
Intermediate Latin	9
Senior Latin	4
Junior Greek	7
Intermediate Greek	14
Senior Greek	4

SCHOOL OF MODERN LANGUAGES.

Junior French	13
Senior French	7
Junior German	15
Senior German	4

SCHOOL OF GEOLOGY AND FIELD BOTANY.

Botany	33
Geology	17
SCHOOL OF HISTORY	28

SCHOOL OF MATHEMATICS.

Junior	25
Intermediate	11
Senior	4

SCHOOL OF AGRICULTURE, CHEMISTRY AND PHYSICS.

Agriculture	9
Chemistry	27
Physics	26

SCHOOL OF ENGLISH.

Junior	52
Senior	13

SCHOOL OF BIOLOGY.

Anatomy	13
Physiology and Hygiene	31
Zoology	11
Structural Botany	5

SCHOOL OF ENGINEERING	14
SCHOOL OF LAW	19
PREPARATORY DEPARTMENT	79
PARTIALLY PREPARATORY	48

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

PROF. JOHN A. MYERS, A. M., DIRECTOR.

This Station was organized in June, 1888, by the Board of Regents of the West Virginia University, accepting the Congressional Appropriation, electing a Director, appointing suitable committees and indicating an outline of the work contemplated at the Station.

The Board, at its last meeting, found no buildings at its command suitable for the use of the Experiment Station, was without any farm for experimental work, and with no means for providing either, beyond the limited appropriation for building purposes set aside by law from the congressional grant.

During the year, by placing an addition to the old armory building, a suitable laboratory, offices, library and work rooms have been provided for the use of the Station Staff. By the first of June, it is hoped to have the necessary chemical apparatus in place and regular scientific work begun in this department

Great stress is being laid upon the development of the Dairy business in this State by the Eexperiment Station, and the advantages of this industry have been presented to the farmers of the State, not only in the bulletin prepared especially upon this industry, but by lectures and addresses at farmers' meetings in many sections of the State. A model Creamery is organized in connection with the Experiment Station, at which scientific investigations concerning the properties of milk are conducted, and instructions given in the art of manufacturing butter and of handling milk. This will offer a fine opportunity to such persons as contemplate engaging in this business, to become thoroughly acquainted with it in a practical and scientific way before engaging in it. The instruction will be very thorough and embrace everything connected with the management of the Creamery, the use of the machinery, the methods of testing milk, of manufacturing and

handling butter, of preparing and shipping it, and of keeping the accounts of the Creamery.

It is presumed that at the next meeting of the Board, provision will be made for completing the staff of scientific investigators to engage in the work. The lack of facilities for carrying on the work had to be overcome before it was possible to begin regular scientific work. This has been accomplished to such an extent that we are now prepared to advance in this direction.

There seems to be a misunderstanding among many of the citizens of the State as to the objects of the Experiment Station.

The law organizing the Station states the objects in section 2d of the "Hatch Act," as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural and artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food of domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may, in each case, be deemed advisable, having due regard to the varying conditions and needs of the respective States or territories."

In this, it will be observed that the supposition of many, that it is simply a seed distributing bureau such as is organized in connection with the Department of Agriculture at Washington, is wholly incorrect, and that under the provision of the law, such distribution is not provided for. There is also no provision by which the citizens of the State should expect scientific investigation carried out which would bear solely upon *private interests;* such as, the analyses of minerals, mineral waters, etc., and the Station does not expect to undertake such work.

In Bulletion No. 1, it was announced that the principal investigations of the Station, for the present, will bear upon the development of the dairy and live stock interests of the State, embracing also the sheep industry, and truck gardening, diseases of animals and plants; growth and preservation of forage and grain crops, and such other matters bearing directly upon the practical questions of agriculture, as the resources of the Station may permit.

The objects of the Station, it will be observed, are principally for scientific investigation, and by the conditions of the Law, no part of this fund can be devoted to carrying on the regular teach-

ing work in the University. This fund must be devoted exclusively to investigations and to the direct advancement of the interests of the agricultural class of the State.

We propose to test any kind of seeds as to purity and germinating power; examine soils, grasses, fodders, feed-stuffs, weeds, insects, insect powders, fertilizers, moulds, fungi; investigate prevailing diseases among plants and animals; experiment on adaptabilty of various species of grains, fruits, grasses and forage crops; assist in organizing Creameries and give instruction in dairy practice, and in the art of dehorning cattle. We will make milk tests of cattle where public benefit is derived from the same and will give instruction in any of the methods employed at the Station, free of charge. We will supply the farmers with plans for building creameries and equipping same, and give plans for building silos.

As soon as our organization can be perfected, we hope to be able to carry on, with our work of a popular character, scientific investigations that may contribute original matter for the advancement of our knowledge of Agricultural subjects.

SCHEDULE OF RECITATIONS FOR BACHELOR OF ARTS COURSE.

Day.	Year	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.
Mon.	1	Physics.	Junior Greek.	Junior Mathematics.	Junior English.
	2	Intermediate Greek.	History.	Rhetoric.	†Chemistry.
	3	Junior Metaphysics.	*Zoology.	Senior English.	*Sen. Lat. or Jun. Ger.*
	4	*Senior German.*	*Junior French.*	Anatomy, &c.	Senior Metaphysics.
Tues.	1		Junior Greek.	Junior Mathematics.	Junior English.
	2	Intermediate Greek.	History.		†Chemistry.
	3	Junior Metaphysics.	*Zoology.	Senior English.	*Sen. Lat. or Jun. Ger.*
	4		*Junior French*	Anatomy.	Senior Metaphysics.
Wed.	1	Physics.	Junior Greek.	Junior Mathematics.	Junior English.
	2	Intermediate Latin.	History.		Intermediate Greek.
	3	Junior Metaphysics.	*Zoology.	Senior English.	*Junior German.*
	4	*Senior German.*	*Junior French.*	Anatomy, &c.	Senior Metaphysics.
Thur.	1		Junior Latin.	Junior Mathematics.	Junior English.
	2	Intermediate Latin.	History.		†Chemistry.
	3	Junior Metaphysics.		Senior English.	*Sen. Greek or Jun. Ger.*
	4		*Junior French.*	Anatomy, &c.	Senior Mathematics.
Fri.	1	Physics.	Junior Latin.	Junior Mathematics.	Junior English.
	2	Intermediate Latin.	History.	Rhetoric.	†Chemistry.
	3	Junior Metaphysics.		Senior English.	*Sen. Greek or Jun. Ger.*
	4	*Senior German.*	*Junior French.*	Anatomy, &c.	Senior Metaphysics
Sat.			Junior Latin.		

*In the Spring term, Geology takes the place of Zoology, and class will recite every day.
†Fall and Winter terms only.
During Spring Ter n of second year Field Botany will recite every day (except Monday) at 7:30 a. m.
Elective studies are printed in *italics.*

SCHEDULE OF RECITATIONS FOR BACHELOR OF SCIENCE COURSE.

Day.	Year.	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.	3:50 P. M.
Monday.	1	Physics.	Junior French.	Junior Math.	Junior English.	
	2	Inter. Math.	*History.*	Rhetoric.	Chemistry.	
	3	Jun. Metaph.	*Zoology.	*Senior English.*	Junior German.	
	4	Senior German.	An. Ch. (opt.)	Anatomy, &c.	Sen. Metaph.	
Tuesday.	1		Junior French.	Junior Math.	Junior English.	
	2		*History.*	Senior French.	Chemistry.	
	3	Jun. Metaph.	*Zoology.	*Senior English.*	Junior German.	Senior Math.
	4	†Agriculture.	An. Ch. (opt.)	Anatomy, &c.	Sen. Metaph..	
Wedn'day	1	Physics.	Junior French.	Junior Math.	Junior English.	
	2	Inter. Math.	*History.*	Senior French.		
	3	Jun. Metaph.	*Zoology.	*Senior English.*	Junior German.	
	4	Senior German.	An. Ch. (opt.)	Anatomy, &c.	Sen. Metaph.	
Thursday.	1		Junior French.	Junior Math.	Junior English.	
	2		*History.*	Senior French.	Chemistry.	
	3	Jun. Metaph.	*Struct. Bot.	*Senior English.*	Junior German.	Sen. Math.
	4	†Agriculture.	An. Ch. (opt.)	Anatomy, &c.	Sen. Metaph.	
Friday.	1	Physics.	Junior French.	Junior Math.	Junior English.	
	2	Inter. Math.	*History.*	Rhetoric.	Chemistry.	
	3	Jun. Metaph.	*Struct. Bot.	*Senior English.*	Junior German	
	4	Senior German.	An. Ch. (opt.)	Anatomy, &c.	Sen. Metaph.	

* In the Spring term, Geology takes the place of Zoology and Structural Botany.
† Fall and Winter terms only.
During the Spring term of the second year, Field Botany will recite every day (except Monday) at 7:30 A. M.
Elective studies are printed in *italics.*

SCHEDULE OF RECITATIONS—UNIVERSITY DEPARTMENT.

CHAPEL EXERCISES AT 8:15 A. M.

	8 30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.	3.30 P. M.
Monday.	Physics. Junior Metaph. Inter. Math. Senior German. Inter. Greek. Engineering. Law.	Junior French. History. *Zoology. Junior Greek. Analyt. Chem. Engineering. Law.	Junior French. Rhetoric. Anatomy, &c. Senior English. Engineering. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Latin. Drawing, &c. Law.	
Tuesday.	†Agriculture. Junior Metaph. Inter. Greek. Engineering. Law.	Junior French. History. *Zoology. Junior Greek. Analyt. Chem. Engineer. Law.	Junior Math. Engineering. Anatomy, &c. Senior English. Senior French. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Latin. Drawing, &c. Law.	Senior Math.
Wed.	Physics. Junior Metaph. Inter. Math. Senior German. Inter. Latin. Engineering. Law.	Junior French. History. *Zoology. Junior Greek. Analyt. Chem. Engineering. Law.	Junior Math. Engineering. Anatomy, &c. Senior English. Senior French. Law.	Junior English. Inter. Greek. Junior German. Senior Metaph. Drawing, &c. Law.	

SCHEDULE OF RECITATIONS—UNIVERSITY DEPARTMENT—*Continued.*

	8 30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.	3.30 P. M.
Thurs.	†Agriculture. Junior Metaph. Engineering. Inter. Latin. Law.	Junior French. History. *Structural Bot. Junior Latin. Analyt. Chem. Engineering. Law.	Junior Math. Engineering. Anatomy, &c. Senior English. Senior French. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Greek Drawing, &c. Law.	Senior Math.
Friday.	Physics. Junior Metaph. Inter. Math. Senior German. Inter. Latin. Engineering. Law.	Junior French. History. *Structural Bot. Junior Latin. Analyt. Chem. Engineer. Law.	Junior French. Rhetoric. Anatomy, &c. Senior English. Engineering. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Greek. Drawing, &c. Law.	
Sat.		Junior Latin.			

Field Botany during the Spring term, at 7:30 A. M.
*Fall and Winter terms. Geology during the Spring term.
†Fall and Winter terms.
Drill at 4:30 P. M. on Monday, Tuesday, Wednesday and Thursday.
Field work in Engineering in the afternoon, when practicable.

WEST VIRGINIA UNIVERSITY,

MORGANTOWN,

CATALOGUE

1889-90.

ANNOUNCEMENTS

FOR

1890-91.

CHARLESTON:
MOSES W. DONNALLY, PUBLIC PRINTER
1890

CALENDAR.

JUNE, 1890—FEBRUARY, 1892.

	S	M	T	W	T	F	S
JUNE.	1	2	3	4	5	6	7
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UNIVERSITY CALENDAR.

The University year includes forty-one weeks, divided into three terms, beginning respectively the first Wednesday of September, the fourth Wednesday of November and the second Wednesday of March.

The annual commencement is on the second Wednesday of June.

1890.

June 2nd–9th—Final Examinations.

June 7th—Saturday, 8 P. M., Regent's Prize Contest in Declamation.

June 8th—Sunday, 11 A. M., Baccalaureate Sermon by Rev. S. J. McPherson, D. D., in University Hall.

June 9th—Monday, 8 P. M., Public Lecture.

June 10th—Tuesday, 8 P. M., Annual Contest between the Literary Societies.

June 11th—Wednesday, 10 A. M., Commencement.

" 1 P. M., Alumni Banquet.

Vacation till the first Wednesday in September.

September 2d—Entrance Examinations.

September 3d—Wednesday, 8:15 A. M., Fall Term begins.

November 17th–25th—Fall Examinations.

November 26th—Wednesday, Winter Term begins.

November 30th—Thanksgiving Recess.

December 1st—Monday, 8:15 A. M., Exercises resumed.

December 4th—Thursday, 7:30 P. M., Senior Orations.

December 19th—Friday, 4 P. M., Christmas Holidays begin.

1891.

January 5th—Monday, 8:15 A. M., Exercises resumed.

February 26th—Thursday, 7:30 P. M., Senior Orations.

March 2d–10th—Winter Term Examinations.

March 11th—Wednesday, Spring Term begins.

June 1st–8th—Final Examinations.

June 6th—Saturday, 8 P. M., Regent's Prize Contest in Declamation.

June 7th—Sunday, Baccalaureate Sermon.

June 8th–10th—Commencement.

BOARD OF REGENTS.

Dist.	Name of Regent.	P. O. Address.	Term Expires.
1.	J. B. SOMMERVILLE	Wheeling	1891
2.	CLARENCE L. SMITH	Fairmont	1891
3.	PEREGRIN HAYS	Glenville	1892
4.	D. D. JOHNSON	Long Beach	1892
5.	JOHN G. SCHILLING	Spencer	1893
6.	EDWARD A. BENNETT	Huntington	1893
7.	WIRT A FRENCH	Princeton	1894
8.	M. J. KESTER	Union	1895
9.	D. C. GALLAHER	Charleston	1895
10.	THOMAS J. FARNSWORTH	Buckhannon	1889*
11.	JOSEPH MORELAND	Morgantown	1889*
12.	JOHN A. ROBINSON	Patterson's Creek	1890
13.	W. W. BROWN	Kabletown	1890

Officers of the Board.

JOHN A. ROBINSON, PRESIDENT.
JOHN I. HARVEY, TREASURER.
W. P. WILLEY, SECRETARY

Executive Committee.

JOHN A. ROBINSON, CHAIRMAN.
JOSEPH MORELAND.
CLARENCE L. SMITH.
J. B. SOMMERVILLE.
T. J. FARNSWORTH.

Superintendent of Grounds and Buildings

JOHN A. MYERS.

*Reappointed: not submitted to the Senate.

FACULTY AND TEACHERS.

E. M. TURNER, LL.D., PRESIDENT,
Professor of Rhetoric.

*D. B. PURINTON, LL.D., VICE PRESIDENT,
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., LIBRARIAN,
Professor of Modern Languages and Literature.

I. C. WHITE, A. M., PH. D.,
Professor of Geology.

A. W. LORENTZ, A. M.,
Principal of Preparatory Department.

ST. GEORGE T. BROOKE, LL.D.,
Professor of Common and Statute Law.

W. P. WILLEY, A. M., SECRETARY,
Professor of Equity Jurisprudence and History.

A. R. WHITEHILL, PH. D.,
Professor of Agriculture, Chemistry and Physics.

P. B. REYNOLDS, D. D.,
Professor of English.

*Resigned Dec , 1889, President Denison University.

JAMES W. HARTIGAN, A. M., M. D.,
Professor of Biology.

LIEUT. EDWARD S. AVIS, 5TH INFANTRY, U. S. A.,
Professor of Mathematics and Military Science and Tactics.

THOMAS M. JACKSON,
Professor of Civil and Mining Engineering.

JOHN A. MYERS, PH. D.,
Director of the Experiment Station.

JAMES S. STEWART, M. S.,
Assistant Professor of Mathematics.

A. J. HARE, A. B.,
Assistant in Preparatory Greek and Latin.

H. G. STOETZER, A. B.,
Assistant in Preparatory Mathematics and English.

MISS MARGARET E. MORROW,
Librarian.

STATE AGRICULTURAL EXPERIMENT STATION.

OFFICIAL STAFF.

PROF. JOHN A. MYERS,
Director.

A. C. MAGRUDER, B. S.,
Creamery-Man.

H. R. BALDWIN,
Chemist.

C. F. MILLSPAUGH, M. D.,
Botanist and Microscopist.

THE UNIVERSITY.

Origin.

The West Virginia University, as originally organized, was chartered by an act of the Legislature passed February 2d, 1867, and was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public Land Scrip" donated by Congress to the several States under the act of July 2, 1862, providing for the establishment in each State of an Agricultural College, were given to the College, and constitute part of the endowment fund. By subsequent act of the Legislature the name of the institution was changed to "West Virginia University," and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of its work.

Location.

Morgantown, the seat of the University, is pleasantly situated on the right bank of the Monongahela river and is surrounded by a picturesque country. It is accessible by rail from Fairmont, on the main line of the Baltimore and Ohio Railroad, and by daily boat from Pittsburgh. It is expected that rail communication will be completed to Pittsburgh during the present year. Morgantown is a small place, where there are few temptations to allure young men from study, and is in this respect an admirable location for an educational institution. Its climate is healthful, the air pure and bracing and free from malaria. The town is supplied with pure mountain water by a system of water works, and with natural gas for fuel and illumination from the Mt. Morris gas wells.

Grounds and Buildings.

The University grounds, comprising about eighteen acres, lie just beyond the borough limits to the north of the town, and command a beautiful view of the Monongahela river and the surrounding country. The present buildings consist of two large and commodious structures, three stories high, which contain the lecture and recitation rooms, library, museum, commencement hall, and the rooms of the two literary societies. The increased attendance of the last two years

has caused some embarrassment in providing rooms for the preparatory classes, which must necessarily be taught in small sections in order to accomplish the best results. There is special need of a separate building for the accommodation of the library and museum, and also a Science Hall, for the schools of Biology, Chemistry and Physics, and Engineering. It is hoped that some friend of the University who has the financial ability, will, in the near future, provide one or other of these buildings.

It is expected, during the present calendar year, to complete the new building for an armory, gymnasium and commencement hall, the old armory building having been turned over to the Experiment Station, and enlarged, to be used as a laboratory for Station work.

Organization.

The organization of the University includes the usual courses of collegiate study, the Classical and the Scientific; a Military Department; a Law School, leading to the degree of Bachelor of Laws; a school of Civil and Mining Engineering, leading to the degree of Civil Engineer; a Preparatory Department, and the State Agricultural Experiment Station.

Endowment Fund: Income.

The endowment fund now amounts to about $108,000. The interest on this fund and the annual appropriations made by the Legislature, constitute the income of the University. Tuition is practically free to all young men in the State over fifteen years of age, each county being entitled to one student under free tuition for every five hundred population in the county. This does not apply, however, to the Law School.

State Cadets.

There are appointed by the members of the Board of Regents, eight young men from each of the thirteen Senatorial districts of the State under regulations prescribed by the Legislature, who, besides receiving free tuition, are furnished their books and stationery. These young men mainly constitute the "Cadet Corps" and receive instruction in the Military Department of the University.

Other students are allowed to enter the Corps as volunteer cadets.

The Calendar.

The University year begins on the first Wednesday of September, and closes on the second Wednesday of June, when the annual commencement takes place. The work of the year is divided into three terms. The Fall Term begins on the first Wednesday of September, the Winter Term on the fourth Wednesday of November, and the Spring Term on the second Wednesday of March. There is a recess of two weeks for the Christmas holidays; otherwise the work of the year is continuous.

Requisites for Admission.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Applicants for admission to the Preparatory department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic.

IV. Those wishing to enter the Academic Department must stand a satisfactory examination on the foregoing list of studies, and also such studies of the Preparatory Department as are related to the academic schools they desire to enter.

V. Students coming from the Normal School or any of its branches, or from approved High Schools, are admitted without examination, upon certificate, under regulations mentioned in a subsequent part of this catalogue under the "Preparatory Department."

VI. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VII. All students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally.

VIII. The first day of the Fall term is devoted to the enrollment and classification of the students present. A new roll is made for each term, and no one will be recognized as a student, or permitted to recite in any class, until his name is entered on the official roll kept by the Secretary of the Faculty. *This rule applies to all students.* If any one who is present at the beginning of any term for the purpose of entering as a student, shall delay matriculating beyond the time allowed for so doing, he will not thereafter be allowed to enroll, except by special permission of the Faculty, upon the presentation of a satisfactory explanation.

Admission of Female Students.

At the meeting of the Board of Regents in June, 1889, the Collegiate Department of the University was opened to female students. In order that those desiring to avail themselves of this action may be properly advised as to the conditions of admission, the Faculty have adopted the following order:

Any young woman who presents evidence of having completed, in other schools, the studies required in the Preparatory Department of the University or their equivalent, shall be allowed to enter the Colle-

giate classes upon passing the required examinations. If not presenting such testimonials and passing such examinations in all these studies, she shall be admitted to such college classes as she may be prepared to enter: *provided* there are at least two such classes occupying in the aggregate not less than ten recitation hours per week; and provided further, that she shall be *conditioned* to pass examinations in all preparatory studies (including Latin) of the *first* Preparatory year within one year from the date of entrance, and in those of the *second* Preparatory year within *two* years from the date of entrance. But if such applicant is a candidate for a degree, she shall, upon entrance, pass successfully the examination in a *majority* of the studies required for admission to the Collegiate Department.

Under these regulations the following collegiate classes are open to young women, who are not prepared to enter the collegiate classes in Latin, Greek or Mathematics, namely, History, Physics, Chemistry, Junior English, Anatomy, Zoology; and in the Spring term, Field Botany.

But, in order to enter the class in History, the applicant must have sufficient age and general culture to pursue the study profitably. To enter the class in Physics or Chemistry, the applicant must have completed Arithmetic, including the metric system of weights and measures, and elementary Algebra; and in Physics, also three books of Geometry; provided, that if the applicant has not studied Geometry, she may enter the class in Physics by taking up the study of Geometry at the same time. To enter the class in Junior English the applicant must have completed the English studies of the Preparatory Department or *their equivalent*.

Entrance Examinations.

All new students are expected to be present on the day preceding the opening of the Fall Term, being for this year September 2d, in order to be examined on the studies required for admission and on those required for admission to the particular schools they desire to enter. They should report at the President's room at the University not later than 9 o'clock A. M., on September 2d, and be by him directed to the examiners in the various branches.

Directions for New Students.

Students who have not before attended the University should, on arriving, report to the President, who will assist them in procuring rooms, and give them directions as to the payment of fees, matriculation, enrollment and selection of their studies.

Matriculation and Tuition Fees.

All students, except appointed cadets, are required to pay a matriculation fee of $5.00 when entering the University. This applies to all departments.

Tuition is free to all students from this State over fifteen years of age, in the several departments of the University, except in the School of Law: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, have free tuition, and all others are charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States are charged $12.50 per term for tuition in the University Department, and $5 per term in the Preparatory Department.

Matriculation fee, - - - - - - - - -	$5 00
Tuition in the Law Department (per term), - - -	8 00
Contingent fee in all Departments (per term), - - -	2 00

Students in Analytical Chemistry will be charged a fee of $20 per year to cover the use of material and wear and tear of apparatus in their hands.

All fees must be paid to the Treasurer, promptly on the first day of each term.

There will be no variations nor deductions from these rates for any cause whatever, except protraeted illness.

Ministerial students are admitted free, upon proper testimonials.

Regulations Concerning Text Books Issued to Cadets.

Under the laws governing the University, appointed eadets are furnished with the necessary text-books at the expense of the State.

At the end of each term all cadets must account to the commandant for the text-books so furnished them; and any cadet who shall abuse or fail to return any book with whieh he is charged, shall pay to the Treasurer the value thereof.

All books returned by cadets shall be kept in store by the book agent and re-issued so long as they may serve the purpose of text books.

Rooms and Boarding.

Students rent rooms in private houses in the town, there being as yet no dormitories on the University grounds. Room rent ranges from 75 cents to $1.25 per week, everything furnished except lights and towels.

Board is furnished either by private families at a stated priee per week, or more generally by the system of elub boarding.

A number of students form a club, and employ some person to cook for them and furnish room and table ware. One of the club acts as eaterer and buys the supplies, of whieh an aecount is kept and the aetual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.75 to $2.00 per week. Board in private families costs $2.00 to $2.50 per week.

Washing costs from $1.00 to $1.50 per month.

Expenses.

The expenses of the student vary according to his habits. The *necessary* expenses of a student at the University are estimated ac-

cording to the following table, excluding clothing and traveling expenses, for the University year of forty-one weeks.

Room rent	from	$31 00 to	$ 52 00
Boarding	"	70 00 to	103 00
Washing	"	11 00 to	16 00
Lights and Incidentals	"	20 00 to	20 00
Text Books (average)	"	8 00 to	15 00
Total		$140 00	$206 00

To this add matriculation fee of $5.00 for the first year, the tuition fees of those students who are required to pay tuition, and contingent fee of $2.00 each term.

Parents and guardians are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

Discipline.

Discipline is directed to the development of manliness and self-respect among the students. They are expected to be gentlemanly in their conduct and correct in their habits, and to deport themselves in all places as reputable and honorable citizens. *No young man will be allowed to retain his connection with the University who persists in habits of dissipation or other disreputable conduct.*

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises.

A report is sent at the beginning of each year to parents or guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, the parent or guardian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is specially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interest of the student and of his class-mates that he be punctual in his place from the first day of the term to the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with his studies.

Religious Worship.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all the students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject:

"*Resolved*, That each student will be required to attend on Sabbath the public service of his choice, or, if he is a minor, as his parents or guardian may direct; but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

Regents' Prize.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University schools, who shall write the best essay on a subject to be selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations:

1. A student competing for the prize shall write on the subject furnished or prescribed as above, the manuscript to be in his own handwriting.
2. All essays shall have fictitious signatures, accompanied with a sealed letter containing both the real and fictitious names.
3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.
4. The successful competitor shall read his essay in public on such evening as the Faculty may direct.

The Regents' Prize of $15.00 for Declamation, shall be presented to any student whose studies are entirely in the Preparatory Department, who shall, upon contest, deliver the best declamation; the prize to be awarded by a committee appointed by the President of the Board of Regents.

In the year 1889, these prizes were awarded as follows: Essay, Mr. W. F. Reynolds; Declamation, Mr. W. S. Joliffe.

English Literature Prize.

A prize of $50 is offered by the President of the University for special excellence in English Literature, under the following regulations:

1. The competitor must be a student in the collegiate department of the University, and not in the school of Law.
2. He must have completed the course in English or be a member of the Senior class in English. His average standing in the regular work of this school during both years must not be below 8.
3. The examination will be a special one on subjects studied during the course, the subjects for each year to be announced by the Professor of English; and the subject of the essay will be some author or period of English or American literature, to be likewise announced from year to year.

4. The essay must be handed to the Professor of English by May 15th. The examination will take place between May 15th and June 1st.

5. The average marks of essay and examination combined will determine the award.

6. Students intending to compete for the prize must give their names to the Professor of English not later than January 1st.

7. The prize will not be awarded unless the essay and examination are worthy.

For the year 1890-91, the subject of examination will be as follows:

Hamlet (Hudson).

The examination will be based on a critical study of this play.

Subject of Essay—The Literary merits and influence of Addison.

The prize was awarded in 1889 to Mr. J. E. Brown, class of 1889.

Prize Foundations.

The attention of those interested in the work of higher education, and especially in the work of the University, is respectfully called to the desirability of stimulating students to special excellence in some study, or in oratory, by offering prizes of money for competition. Citizens of our State who have the financial ability, could confer no more lasting benefit than by placing in the hands of the Board of Regents as a trust fund, a certain sum of money as a prize foundation, the interest of which shall be annually offered as a prize for special excellence in some department of study. Whatever excellence is attained by the work of the University will react upon the whole system of State education, and be a stimulous to ambitious and deserving youth throughout the State.

Library and Reading Room.

About five thousand volumes have been carefully selected and placed on the shelves of the Library, including not only many choice and valuable books of reference, but also standard works of the various departments of History, Biography, Theology, Agriculture, Arts, Sciences and general literature.

The friends of education are respectfully requested to make contributions to its shelves.

A deposit of $2.00 is required of all students who wish to avail themselves of the privileges of the library. This is intended to secure the safe keeping and return of the books borrowed.

The Library has been removed to the large room formerly used as the Chapel, and is now open every day from 8½ A. M. to 12 M., and from 2 to 5 P. M. for the delivery of books and for consultation. Part of the room is used as a Reading Room, which is supplied with the leading magazines and periodicals of this country and Europe.

A large and valuable addition of books in the various departments of Science and Literature has been added to the Library during the year.

Books of reference are not allowed to be taken from the Library; so that they are accessible for consultation at all hours.

Arrangements are also made by which books on special subjects are temporarily withdrawn from circulation when required for the use

of students in any special study, or for the preparation of essays required in connection with the regular class-work.

Museum.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labeled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,300 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

The vicinity of the University offers unrivaled advantages for the study of Practical Geology.

Literary Societies.

There are two of these (the Parthenon and Columbian) in connection with the University, supplied with suitable halls handsomely furnished, whose exercises in Composition, Reading, Oration, Debate and Criticism, are, in many respects, of great advantage to the student. They also afford facilities for an acquaintance with parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during commencement week.

THE COLLEGIATE DEPARTMENT.

COLLEGIATE DEPARTMENT.

FACULTY.

E. M. TURNER, LL.D., PRESIDENT,
Professor of Rhetoric.

. . . . . .
**Professor of Metaphysics.*

ROBERT C. BERKELEY, M. A.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M.,
Professor of Modern Languages and Literature.

I. C. WHITE, A. M., PH. D.,
Professor of Geology.

W. P. WILLEY, A. M.,
Professor of History.

A. R. WHITEHILL, PH. D.,
Professor of Agriculture, Chemistry and Physics.

REV. P. B. REYNOLDS, D. D.,
Professor of English.

JAMES W. HARTIGAN, A. M., M. D.,
Professor of Biology.

LIEUT. EDWARD S. AVIS, 5TH INFANTRY, U. S. A.,
Professor of Mathematics.

*To be elected in June, 1890.

COURSES OF STUDY IN THE COLLEGIATE DEPARTMENT.

Two regular courses of study are offered in the Collegiate Department, leading to the degrees of Bachelor of Arts and Bachelor of Sciences.

The details of the requirements for these degrees, and of the courses of study for each of them, are given on subsequent pages.

Besides the regular courses for degrees, students who do not expect to stand for a degree are allowed under advice of the Faculty, to select such studies in the Collegiate Department for which they are prepared as may be preferred by them and are adapted to their life-work. All students are, however, advised to take a regular course as far as possible.

The course of study for the Bachelor's degrees is intended to cover four years. Students who undertake to complete the course in less time must necessarily burden themselves with work to such an extent that they have no time for reading or research outside of the regular class room work. The widened field of study and research in all departments of knowledge makes it impossible, in a college course covering the usual curriculum of study, to do more than give the main facts embraced in the great departments of Philosophy and Science, which must be supplemented by the independent study of the student. If his time is all taken up in preparing recitations, he has no time for specializing his work in any department which may be particularly attractive to him, or in the line of his subsequent work.

Requirements for Admission.

To enter the Collegiate Department, students must have completed the course required for admission, as stated in the course of study for the Preparatory department, or its equivalent; *provided*, that students who have not completed all the preparatory studies will be re-

quired to take, first, the studies of the Preparatory Department in which they are deficient; and, in addition to these, they may take such studies in the Collegiate Department as they are prepared to take, under the advice of the Faculty.

The course of study in the Preparatory Department will be found in the latter part of this catalogue.

Election of Studies.

Each student in the Collegiate Department is required to attend at least sixteen and *not more than eighteen* recitations per week, and to adhere, *throughout the year*, to the studies selected, unless the Faculty, for good cause shown, allow him to attend a less or greater number, or to make an exchange.

Students will be classed in the several subjects of study, according to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

Distribution of Studies.

The subjects of study in the Collegiate Department are distributed into ten groups, as follows:

Rhetoric, Metaphysics, Ancient Languages, Modern Languages, Geology, History, Mathematics, Agriculture, Chemistry and Physics, English, and Biology.

Examinations.

Written examinations are held in each class at the close of each term, and at such other times as each Professor may deem necessary; *provided*, such special examinations shall not interfere with other classes.

No student will be excused for non-attendance at examinations, except upon presentation of a reason which may be considered valid by the Faculty.

When a student has attended the examination in any class and has failed to pass, no second examination will be allowed such student except by permission of the Faculty.

Any student whose term marks for any term average 8.5 on a scale of 10 in any subject extending throughout the whole year, who is absent, for some unavoidable cause, from the regular examination held at the close of such term, may be excused from passing such examination—*provided*, that the Faculty will first determine whether the cause for absence is sufficient; and provided further, that such exemption from examination will not be allowed for more than one term in any academic year.

The time allowed for examination shall not be less than two hours, and not more than five hours.

Grading.

Recitations and examinations are graded on a scale of 10. In order to pass from a lower to a higher class in any subject, a student

must attain an average standing of 7 on a scale of 10, for each term in that class during the year.

In ascertaining a student's standing in his classess, examination marks count one-half and recitation marks one-half.

All absences from recitations are counted against the student in estimating his standing in his classes.

Requirements for Degree of Bachelor of Arts.

The degree of Bachelor of Arts requires the completion of the following course of study with an average standing of 7 each term in each of the studies named in the respective years.

This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.

(NOTE.—The figures in parenthesis indicate the number of recitations per week. The hours for recitation are designated in the *Schedule of Recitations* at the end of this catalogue. While students are not required to confine themselves strictly to the order of study as here laid down, in making their selections they are advised to do so, in order to avoid conflicts in hours, as the schedule of recitations is arranged to suit this order, and changes will not be made to accommodate those who make a different selection.)

In order to enter this course of study, applicants must have completed the course of study in the Preparatory Department, or its equivalent, *except Book-keeping.*

Bachelor of Arts Course.

FIRST YEAR STUDIES.

Junior Latin (3); Junior Greek (3); Junior Mathematics (5): (Fall and Winter Terms); Junior English (5); Physics (3).

SECOND YEAR STUDIES.

Fall and Winter Terms. Intermediate Latin (3); Intermediate Greek (3); History (3); Inorganic Chemistry (4); Rhetoric (2).

Spring Term. Drop Chemistry and take Field Botany (4).

THIRD YEAR STUDIES.

Fall and Winter Terms. Senior Latin (elective) (2); Senior Greek (elective) (2); Junior German (elective) (5); Junior Metaphysics (5); Senior English (5); Zoology (3).

Spring Term. Drop Zoology and take Geology (4).

Four literary performances during this year, under the Professor of English.

FOURTH YEAR STUDIES.

Senior Metaphysics (5); Anatomy, Physiology and Hygiene (5); Senior German (elective) (3), or Junior French (elective) (5), and, in the Spring Term, Geology (3).

Two original public performances in chapel ; oration or essay for commencement.

Electives. In the third year Junior German (5) and in the fourth year either Senior German (3) or Junior French (5) may be taken instead of the third (Senior) year of Latin *and* Greek. Or, Junior French (5) or Junior German (5) in the fourth year may be taken instead of Senior Latin *or* Senior Greek in the third year. No other electives or substitutions are allowed for this degree.

Optionals. Anglo-Saxon (2) : Political Science (2).

Requirements for Degree of Bachelor of Sciences.

The degree of Bachelor of Sciences requires the completion of the following course of study, with an average standing of 7 each term in each of the studies named in the respective years.

This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.

In order to enter this course of study, applicants must have completed the course of study in the Preparatory Department, or its equivalent, *except Greek.*

FIRST YEAR STUDIES

Junior Mathematics (5) : Junior English (5) ; Junior French (5) ; Physics (3).

SECOND YEAR STUDIES.

Intermediate Mathematics (3) ; Senior French (3) ; History (elective) (3) ; Chemistry (4) ; Rhetoric (2), and in Spring Term, Field Botany (4).

THIRD YEAR STUDIES.

Fall and Winter Terms.—Senior Mathematics (2); Junior Metaphysics (5); Junior German (5); Zoology and Structural Botany (5); and Senior English (elective) (5).

In the Spring Term, Geology (4) takes the place of Zoology and Structural Botany.

Four literary performances required during the year, under the Professor of English.

FOURTH YEAR STUDIES.

Senior Metaphysics (5); Senior German (3); Anatomy, Physiology and Hygiene (5); and during the Fall and Winter Terms, Agriculture (2), and Geology (3) during the Spring term.

Two original public performances in the chapel, and an oration or essay for commencement.

Elective.—History (3) in the second year, may be taken in the place of Senior English (5) in the third year. No other election or substitution is allowed for this degree.

Optionals.—Anglo-Saxon (2) : Political Science (2).

The various subjects and text books in the several studies enumerated in the above courses are set out in full, by years and terms, in the announcements of the Professors of the several schools on the next following pages.

Post-Graduate Courses.

MASTER OF ARTS.

The degree of Master of Arts will hereafter be given to Bachelors of Arts, who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

Master of Sciences.

The degree of Master of Sciences will hereafter be given to Bachelors of Science who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the coure.

Degrees Conferred—June 12, 1889.

HONORARY DEGREES.

LL.D.—Hon. E. Willis Wilson, Charleston, W. Va.
D. D —Rev. George E. Hite, Parkersburg.
" —Rev. W. P. Walker, Huntington.
PH. D.—Prof. John A. Myers.
C. E.—Professor Thomas M. Jackson.
" —Charles E. Grafton, class of 1880.
" —John L. Johnston, class of 1883.
A. M.—R. A. Armstrong, A. B., class of 1886.
" —Professor St. George T. Brooke.
" —R. L. P. Brown, M. D.
" —U. S. Fleming, Principal City Schools, Grafton, W. Va.
" —Thomas C. Miller, Principal City Schools, Fairmont, W. Va.

Degrees in Course, 1889.

Bachelor of Arts—Bernard C. Alderson, James E. Dawson, Charles N. Finnell, Andrew J. Hare, Gordon G. Heiner, Joseph A. Jackson, Louis A. Lindemuth, John L. Roemer, Herman G. Stoetzer.

Bachelor of Sciences—James E. Brown, George B. Chorpenning, Charles Rankin.

Bachelor of Laws—William B. Cornwell, Nathan C. McNeill, W. L Pickett Peyton, Stewart F. Reed, Edward G. Smith, J. Franklin Wilson, Thomas G. Yates.

ANNOUNCEMENTS

OF THE

COURSE OF INSTRUCTION,

BY THE

PROFESSORS IN THE COLLEGIATE DEPARTMENT.

RHETORIC.

PRESIDENT TURNER.

The course of study in this subject requires two hours per week during the second year of the Collegiate Course for the classical and scientific degrees.

To enter, the student must have completed the course of the Junior year in English.

In the Fall term the subjects of study will be the elementary parts of discourse, diction, sentence, structure, figures. During the Winter term, lectures on the principles and processes of Discourse, and its various forms, will be given. In the Spring term the principles of Criticism will be investigated, as preparatory to the Senior year in English.

If time allows, practical drill in elocution will constitute part of the work of the year.

Analyses of themes and formal essays will be required throughout the year.

Text-book—first term—Hart.

Metaphysics.

NOTE.—The chair of Metaphysics was made vacant during the past year by the resignation of Prof. Purinton. The vacancy will be filled in June, 1890.

The course of study embraces Psychology, Logic, Ethics, Natural Theology and evidences of Christianity, requiring two years for its completion.

Instruction is given by means of text book recitations, lectures and parallel readings.

Wherever conflicting theories are encountered, the various arguments and their necessary tendencies are presented to the student, and he is encouraged to investigate and judge for himself.

The basal facts and principles of all knowledge and belief are so presented as to avoid bigotry on the one hand and skepticism on the other.

The course of instruction is as follows :

	Fall Term.	Winter Term.	Spring Term
Junior Year.	Intellectual Science.	Intellectual Science.	Logic.
Senior Year.	Ethics.	Natural Theism.	Christian Theism.

Text books and books of reference :

Porter's Intellectual Science, Baine's Mental Science, Bascom's Psychology, McCosh' Intuitions, Hamilton's Lectures, Upham's Mental Philosophy, Edwards on the Will, Jevons-Hill's Logic, Mill's, Hamilton's, Coppee's, Atwater's and DeMorgan's Logic.

The text book in Ethics is Janet's Elements of Morals, with reference to the works of Wayland, Baine, Hopkins, Hickok, Dymond and Winslow.

In Natural Theology and Evidences of Christianity, no text book is used. A full course of lectures on Christian Theism is given, which is designed to cover the ground usually taken by text books on these subjects. Frequent reference is made to the best authors, ancient and modern.

Ancient Languages.

PROF. BERKELEY.

The subjects taught in this school are :

I. The Latin Language and Literature, in which there are three classes, viz ; *Junior*, *Intermediate* and *Senior*.

Text books used :

1. JUNIOR CLASS.

Fall Term.—Virgil's Bucolics and Georgics.
Winter Term.—Horace's Odes and Epodes.
Spring Term.—Cicero de Senectute and de Amicitia.

2. INTERMEDIATE CLASS.

Fall Term—Livy ; Bender's Roman Literature.
Winter Term—Horace's Satires and Epistles.
Spring Term—Cicero de Officiis.

3. SENIOR CLASS.

Fall Term—The Agricola and Annals of Tacitus.
Winter Term—The Annals of Tacitus (continued).
Spring Term—Juvenal.

In each class special attention is paid to the translation of English into Latin, and to the grammar and etymological structure of the language. A private course of parallel reading will also be prescribed whenever practicable.

Lexicons recommended for each Class—Harper's or White's.

II. The Greek Language and Literature, in which there are also three classes, viz: *Junior; Intermediate and Senior.*

Text books used:

1. JUNIOR CLASS.

Fall Term—Herodotus.
Winter Term—Homer's Iliad.
Spring Term—Homer's Odyssey.

2 INTERMEDIATE CLASS.

Fall Term—Xenephon's Memorabilia: Jebb's Greek Literature.
Winter Term—Plato's Apology and Crito.
Spring Term—Euripides.

3. SENIOR CLASS.

Fall Term—Demosthenes.
Winter Term—Sopholes.
Spring Term—Thucydides.

As mentioned above, in the case of the Latin language, special attention is paid to the translation of English into Greek, to the grammar and structure of the language, and to private courses of parallel reading.

Lexicon Recommended for each Class—Liddell's and Scott's—the abridged edition for the Junior—the unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin according to the so-called Roman method.

The Junior and Intermediate classes recite three times a week, and the Senior twice a week.

Modern Languages

PROF. HARVEY.

In this School are taught French and German. In each Language there are two classes, Junior and Senior. The Junior Classes are thoroughly drilled in the Etymological forms, and are practiced in the simpler forms of Syntax. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the Senior classes. Junior

classes meet five times a week. Senior classes meet two or three times a week.

For admission to this school, students must have completed the course of study in English and Latin of the Preparatory Department, or their equivalent.

Text Books:

JUNIOR FRENCH.

Fall Term—Whitney's or Edgren's Grammar, Super's Reader.

Winter Term—Grammar continued, Super's Reader continued.

Spring Term—Grammar continued, Colomba, Picciola, or selections from modern authors.

SENIOR FRENCH.

Fall Term—Hugo's Bug Jargal, or other selection, Grammar and Exercise.

Winter Term—Corneille's Cid, Racine's Athalie, Grammar and Exercises.

Spring Term—Moliere's Misanthrope, Hugo's Ruy Blas, Warren's or Saintbury's French Literature.

JUNIOR GERMAN.

Fall Term—Joynes-Meissner's or Von der Smissen-Faser's Grammar and Joyne's Reader.

Winter Term—Grammar continued, Reader continued.

Spring Term—Grammar continued, Schiller's Jungfrau von Orleans.

SENIOR GERMAN.

Fall Term—Lessing's Minna von Barnhelm, or other selection, Grammar and Exercises.

Winter Term—Gœthe's Iphigenia begun, Grammar and Exercises continued.

Spring Term—Nathan der Weise, Gœthe's Herman and Dorothea, Wenckebach's or Hosmer's German Literature. Heath's German and French Dictionaries are recommended.

Geology and Field Botany.

PROF. WHITE.

The course in Geology according to a recent order of the Board of Regents, now occupies two terms. Students in the regular University classes will take up this subject at the beginning of the Spring term in the third year, and finish the same during the Spring term of the following year.

Any student in the collegiate department of the University can enter the class in Field Botany (which meets at 7:30 A. M., during the Spring term) but to enter the class in Geology, the student must be proficient in Chemistry, Botany and Zoology, except candidates for the degree of C. E., of whom only Chemistry is required.

The Class in Botany will meet every day in the week except Monday. The class beginning Geology after the present year (1890) will take the place of Zoology at the 2nd hour during the Spring Term, and meet every day in the week, Structural Geology, and local Geology with a special study of the Coal Measure rocks in the immediate vicinity of the University, and short excursions, will form the principal work during the first term.

The Second Term will be devoted to Dynamical Geology, Economics, and the further study of General Geology, together with mineralogical work. The long excursion referred to below will be taken during this term. This class will meet in the afternoon on Tuesdays, Wednesdays and Thursdays.

Excursion.

During the Spring Term of each year, usually about the middle of May, a Geological excursion will be taken through West Virginia and adjoining States, for the purpose of training the student in the work of Practical Geology. No State in the Union has so many advantages to give the student in this particular line. The site of the University itself, located as it is in the heart of the Appalachian Coal Field and close to a great oil and gas region, presents unrivaled facilities for the study of all problems connected with this useful science, and especial attention is given to every phase of Economic and Practical Geology, during term work as well as during the excursion. This excursion will be required of all students who graduate in the Scientific Department of the University, but it is open to all who take the study. The necessary expenses of the excursion never exceed $25, unless the members of the class desire to go further, or traverse more ground than is customary.

Text books :

Geology, Lecoute's Elements. For reference, Dana's Manual, Lyell's Principles, and Geike's Text Book.

Botany, Wood.

History and Political Science.

PROF. WILLEY.

The course of instruction in this school is directed to two main purposes : 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but also the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study extends through three terms, the class reciting three hours per week. The Fall term is given to the division embracing Ancient history, and the Winter and Spring terms to Mediæval and Modern history, including United States history.

The text-books are Myer's Ancient, Mediæval and Modern histories ; with *reference* to Ridpath's Encyclopædia of Universal History, Green's Short History of the English People, Michelet's French Rev-

olution, Freeman's Historical Essays (first and third series), Arnold's Lectures on Modern History, Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

A course of lectures is given during the second and third terms on "Civics," tracing the history of governments from primitive times through successive stages of development down to the present day, and explaining in detail the governmental machinery of modern towns, counties, states and nations.

Political Science.

An optional course in Political Science will be opened in this department for the year 1890–'91, if a sufficient number of students offer to form a class. The course will be supplemental to the series of lectures on Civics delivered to the class in History, and will be open only to those who have taken the course in History.

Agriculture, Chemistry and Physics.

PROF. A. R. WHITEHILL.

Instruction in the several departments of this school is by text-books, lectures and experiments. The courses in General and Practical Physics and General and Analytical Chemistry are continued throughout the year; the course in Agriculture is completed at the end of the Winter term.

In *Agriculture*, the attention of the class is directed to the following subjects: The organic and inorganic food of plants, their germination, development and accompanying physical changes; the chemistry and physics of soils, their origin, formation, classification, exhaustion and relation to vegetable nutrition; drainage, irrigation, sub-soiling, manures, grain and forage crops, the care and management of stock, etc.

The new edition of Emerson and Flint's Manual of Agriculture is used as the text-book, and the subject matter is illustrated, as far as possible, by experiments in the laboratory.

In *Physics*, as a preparation for after study, the leading principles of Mechanics are studied during the Fall term. During the Winter term, Electricity, Magnetism and Sound are taken up in the order named, and these are followed by Heat and Light during the Spring term. Problems and experiments are introduced largely throughout the course, and the modern doctrines of Molecular Physics are fully explained. Students may enter the class at the beginning of any term, but the entire course requires one year for its completion.

Arnott's Physics and Avery's Natural Philosophy are used as text books, and the works of Deschanel, Ganot and other well known authors are in the laboratory, as books of reference.

In *Practical Physics*, the course is intended to aid the student in acquiring skill in the use of Physical apparatus, and will be open to those who have taken the course of General Physics in the University, or who can stand an examination on the matter contained in the text books of the grade of Avery's Natural Philosophy or Gage's Elements of Physics. So far as the apparatus will permit, practical work in

dynamics, sound, heat and light, will be undertaken, and the elements of electrical engineering will receive attention.

In *Chemistry*, the subjects presented are the distinctive features of the study, the laws of chemical combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, allusion is made to the applications of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account. Inorganic Chemistry and Chemical Philosophy are studied during the Fall and Winter terms, and Organic Chemistry during the Spring term.

In *Analytical Chemistry* facilities are provided for systematic instruction in qualitative analysis, and for general practice in experimental work. Members of the class are supplied with the necessary apparatus and chemicals, and are required to spend from one to two hours daily in the laboratory. The course includes the preparation of some of the more important gases and salts, and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are from time to time given to test the progress of the student in his work. During the Spring term special attention is directed to some of the more important medical preparations and to the analysis of waters: and an elementary course in quantitative work is added.

Students who have completed the course in General Chemistry in the University are admitted to this class without examination. All other applicants will be required to pass an examination on the matter contained in any elementary work on the subject named.

Students in the several classes of this department have access to a large and valuable collection of Chemical and Physical apparatus, and the various recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Brush dynamo, 3 Trœmer balances, Jolly balance, 2 Ruhmkorff coils, Holtz and plate electrical machines with accessories, Leyden and galvanic batteries, Geissler tubes, microscope, spectroscope, polariscope, heliostat, colorimeter, 2 air pumps with accessories, sonometer, convex and concave mirrors, radiometer, meteorological instruments, apparatus for electroplating and gas analysis, telephone, telegraphic instruments, combustion furnaces, photographer's outfit, models, pulleys, pendulums, etc.

English.

PROF. REYNOLDS.

The regular course in this school includes the subjects named below, and is arranged for two years, as follows:

JUNIOR CLASS.

First term—Exercises in Historical, Etymological and Phonetic analysis of the English language.

Second term—History and development of the English language, and exercises in logical analysis and English constructions.

Third term—First principles of Political Economy, and an introduction to the study of English literature.

Five hours a week are given to exercises in this class.

SENIOR YEAR.

First term—Introduction to and exercises in literary criticism.

Second term—Study of representative authors in different departments of English literature.

Third term—Political Economy, and the discussion of leading practical questions in social science.

Five hours a week are given to instruction in this class.

Instruction is given by text books, lectures, exercises and reference to good authorities.

The requirements for entering the Junior Class are, a certificate of promotion in the English branches taught in the Preparatory Department of the University, or evidence of having taken an equivalent course elsewhere.

The requirements for entering the Senior Class are, promotion in the Junier Class, and also promotion in the School of Rhetoric, or satisfactory equivalents for such promotions.

Special Course in Anglo Saxon.

A special course will be given in the Anglo-Saxon language and literature and English philology during the year 1890–91. Two hours a week throughout the year will be given to this course.

For the present, this course will be optional.

School of Biology.

PROF. HARTIGAN.

The course of study in this school requires two years. In the first year, Zoology and Structural Botany are studied; and in the second Human Anatomy, Physiology and Hygiene.

FIRST YEAR—ZOOLOGY AND STRUCTURAL BOTANY.

Fall and Winter Terms—Zoology is studied during these terms. In the Fall term, Comparative Zoology is considered, while the Winter term is devoted to the study of Systematic Zoology and Histology. Each student in this branch is required to skeletonize five vertebrate animals; and all students except candidates for the degree of Bachelor of Arts, are required to prepare, cut, stain and mount for microscopical examination, a certain number of specimens of the various animal tissues.

Text-books in Zoology: Orton, Packard, Claus; and the works of Darwin, Haeckel and Spencer for reference. In Histology, Klien, Stricker, Shafer, Cornie and Ranvier.

Structural Botany is also studied during the Fall and Winter terms, the class reciting twice a week. The General Anatomy and Physiology of plants will first be studied, and then the special Anatomy and Physiology of plant tissue, together with the microscopical examination of these, and practical work in Bacteriology.

Text-books and books of reference: Bessey's Structural Botany; Gray, Sachs, Bently, Cooke, Crookshank's Bacteriology, Dawson's Geological History of Plants.

SECOND YEAR—ANATOMY, PHYSIOLOGY AND HYGIENE.

Fall and Winter Terms—Five lectures are given weekly on General, Descriptive and Surgical Anatomy during the Fall and Winter terms. While each lecture on this branch of Anatomy will be fully illustrated by models, charts, specimens, manikins and every other means tending to impress the facts upon the student's mind, the skeleton or cadaver will furnish the proper text of every lecture.

Practical Anatomy—As a thorough knowledge of Anatomy can only be obtained by dissecting, every student in this branch of Anatomy is required to dissect at least one part of a subject one term. This constitutes a full course of dissection, and will be certified to by the demonstrator in charge, after the student has passed a satisfactory examination on the parts dissected. The dissecting room of the University is large, thoroughly equipped, well ventilated and lighted, and is heated by steam, so that any desired temperature can be maintained, thus preventing the freezing and thawing of subjects during the colder months, which is so detrimental to their usefulness.

This room will be opened four nights in the week, from 7 till 10 o'clock during the Fall term, and from 6 till 9 o'clock during the Winter term. A demonstrator will be present each night. Material for dissection is furnished free.

NOTE.—Candidates for Bachelor's degrees are required to take the course in general anatomy only. Those intending to study medicine, take also the course in Practical Anatomy.

Text Books, &c: Gray, Wilson, Quain, Allen's Dissector, Holden's Manual.

Spring Term—Physiology is studied during the spring term, including five lectures every week. The consideration of the Physiology of each organ will be preceded by lectures on its minute anatomy. The study of this branch will be facilitated by diagrams and charts and the use of the microscope, and by experiments upon inferior animals. Instruction in the Practical Analysis of Urine, and in the miscropical examination of Urinary deposits and the different fluids of the body will be given in the course. Hygiene will be considered in connection with Physiology.

Text books and books of reference: Flint's Human Physiology, Yeo's Manual, Kirk, Dalton, Carpenter, Foster.

In Hygiene, Parke's, Huxley and Youman, Wilson.

Mathematics.

E. S. AVIS, 2ND LIEUT. 5TH U. S. INFANTRY.

The course of instruction in Mathematics consists of three years.

JUNIOR YEAR.

First term—Trigonometry, Elements of Surveying.
Second term—Analytical Geometry.
Third term—Descriptive Geometry.

INTERMEDIATE YEAR.

First term—The Calculus.
Second term—The Calculus.
Third term—Analytical Mechanics.

SENIOR YEAR.

First term—Analytical Mechanics.
Second term—Analytical Mechanics. Astronomy.
Third term—Astronomy.

The third term of the Junior year is not required of candidates for the degree of Bacnelor of Arts. During that term these candidates may take practical surveying as an optional study in the Department of Engineering.

Students take the course in Mathematics to prepare themselves for the higher Mathematics, for the applications of Mathematics, or to obtain that mathematical training of the mind which is acknowledged to be of great value. Therefore, students will be presumed to be actuated by an earnest desire to master the elements of the science, or to improve their minds, and while they will be assisted with all necessary explanations, they will be required to study. The text books have been carefully selected with this view.

Students are required to pass an examination in University Algebra and Geometry, in order to enter the Junior year in this school.

They should be well grounded in Logarithms, in Factoring, in the Discussion of Equations, and in the Eight Roots of the Four Forms of the Quadratic Equation, $x^2+2px=+q$.

THE DEPARTMENT

OF

CIVIL AND MINING ENGINEERING.

FACULTY.

E. M. TURNER, LL.D., PRESIDENT.
Professor of Rhetoric.

T. M. JACKSON,
Professor of Civil and Mining Engineering.

JOHN I. HARVEY, A. M.,
Professor of French.

I. C. WHITE, PH. D.,
Professor of Geology and Mineralogy.

A. R. WHITEHILL, PH. D.,
Professor of Chemistry and Physics.

P. B. REYNOLDS, A. M.,
Professor of English.

E. S. AVIS, 2D LIEUT. 5TH INFANTRY, U. S. A.,
Professor of Mathematics.

COURSE OF STUDY

IN THE

DEPARTMENT OF CIVIL AND MINING ENGINEERING.

This department was established in 1888. Its object is to furnish, along with other necessary studies, a thorough and complete course of training and practical work for the profession of Engineering. To enter this course of study, the student, if intending to apply for the degree of Civil Engineer, must have completed the course of study of the Preparatory Department of the University, or its equivalent, except Greek.

The course of study for the degree of Civil Engineer is distributed over a term of four years, and includes the following subjects in the Collegiate Department, in addition to the engineering studies proper: Mathematics, Physics, Chemistry, (general and analytic), Geology and Mineralogy, French, Rhetoric, and the Junior year of the English course.

Special Notice.—No student will be recognized as a candidate for the degree of Civil Engineer who does not devote his *entire time*, during the last year of the course, *exclusively* to engineering study.

Course of Study for the Degree of Civil Engineer.

REQUIREMENTS FOR ADMISSION.

To enter this course the student must have completed the course of study in the Preparatory Department, or its equivalent, except Greek.

Following is the course of study:

FIRST YEAR.

Physics, Junior French, Trigonometry, Analytical and Descriptive Geometry, Surveying, Drawing.

SECOND YEAR.

Calculus, Analytical Mechanics, Senior French, Geology and Mineralogy, Rhetoric, Chemistry, Engineering, (Railroad Surveying, &c., topographical drawing, &c.)

THIRD YEAR.

Analytical Chemistry, Junior English, Analytical Mechanics, Astronomy, Railroad Location, Mine Surveying, Foundations, Topography, &c.

FOURTH YEAR.

Engineering, (Bridging, Tunneling, Mine Engineering, Hydraulic, Geodetic and Sanitary Engineering, &c.) A written thesis will be required, in the 4th year, of all candidates for the degree of Civil Engineer.

Announcement of the Professor of Civil and Mining Engineering.

PROF. JACKSON.

The course of study in Engineering proper, will cover four years, distributed as follows:

FIRST YEAR.

First term—Free Hand Drawing (Warren).
Second term—Lettering and Shading (Copley and Lectures).
Third term—Surveying (Gillespie).
Reference books: Johnson, Dorr, Bellows & Hodgman.

SECOND YEAR.

First term—Roads and Railroads (Gillespie).
Second term—Railroad Curves and Practice (Henck).
Third term—Higher Surveying and Railroad Location.
Reference books: Searles, Shunk, Henck, Tratwine, Wellington.

THIRD YEAR.

First term—Civil Engineering (Mahan).
Second term—Topography (Smith), Stereotomy (Warren).
Third term—Architecture, Styles, Drawing, &c.
Reference books: Gilmore, Haupt, Reed, Wheeler.

FOURTH YEAR.

First term—Bridges and Graphics (Merriman).

Second term—Hydraulics (Merriman), Sanitation.

Third term—Mining, General Engineering, Original Work, Contracts and Reports.

Reference books: Francis, Greene, Du Bois, Waring, Hyslop, Rankine, Haupt.

Details of Course of Instruction in Engineering.

FIRST YEAR.

Drawing—The student is given a complete course in free hand-topographical, map and color drawing, ornamentation and lettering. Every day is occupied with some part of the work. Students are required to submit finished drawings of special work from time to time.

Surveying—In surveying the student has the theory and practice. He makes his own surveys in the field and necessary calculations. Each student must make an individual survey, lay off and divide up land and do all that a county surveyor would be called upon to perform.

Students have the use of all surveying instruments, of which this department has a large variety.

SECOND YEAR.

The student takes up the study of *Roads and Railroads*—the survey, construction and maintenance of common roads, and the theory of railroads, the theory of curves and curve surveying, and curve-tracing on the ground, the location of railroads. The student must calculate and practically locate railroad curves, levels, &c. Considerable time is spent in the field in this work. The aim is to make each man a proficient instrument-man during this year.

THIRD YEAR.

In this year the student takes up the study of foundations, limes, cements, masonry construction, pile construction, canals, river and harbor improvements. The construction of topographical maps and contours, the location of railroad lines from contours, stone cutting and field work in all branches covered up to date, also the study of architectural styles.

FOURTH YEAR.

Engineering students who are candidates for the degree of Civil Engineer, are required to devote this year *exclusively* to engineering studies. The work during the year will include the theory of Roofs and Bridges, the working out of actual bridge practice, the designing of bridges and roofs; Practical Hydraulics, the designing of water works for towns; Sewerage, the designing of sewerage for towns; Mining, and construction of mining plants, coke ovens, &c. The class will visit engineering works in progress and make reports upon the same; will visit mines and report upon the methods of working. They will design original work in Engineering structures, with the study and effect of contracts, and make reports on new engineering works and projects. The University has a large assortment of the modern instruments used in Engineering and Mining.

Note.—A satisfactory written thesis will be required, in the fourth year, of all candidates for the degree of Civil Engineer.

As many young men who enter college are prevented from completing the course and taking a degree, it is intended, in the course in Engineering, to make practical application of theory as the course proceeds. Thus it is expected that a student who can take only the first year of the Engineering course will be a thorough master of the practical details of surveying, able to do any of the work required of an official county surveyor, such as identifying lines, mapping and locating surveys from papers, preparing jury maps in legal controversies concerning land; in short, thoroughly qualified as a practical surveyor.

At the end of the second year of the Engineering course the student is expected to be able to act as "instrument man" in an Engineering corps: and so through the third and fourth years, giving such practical work in the application of engineering theory as will enable the student to take hold at once, without further experience in learning the fundamental practice of his profession.

Students who do not expect to apply for a degree may take such studies in the school of Engineering as they may be prepared for, as far as the arranged schedule of recitations may permit.

ENGINEERING SOCIETY.

Engineering students are expected to join the "Engineering Society." Its purpose is to discuss engineering subjects generally. Great good has already come out of the organization; and it is the aim to conduct its affairs in such manner as to derive the greatest benefit. An engineering student may also be a member of a Literary Society.

SCHEDULE OF RECITATIONS—ENGINEERING COURSE.

Day.	Year.	8:30 A. M	9:30 A. M.	10:30 A. M	11:30 A. M.	3:30 P. M
MONDAY.	1	Physics	Junior French	Junior Math.	Drawing, &c.	
	2	Inter. Math	Engin & Geol.*	Rheoteric.	Chemistry.	
	3	Eng neer'ng	Analyt Chem.		Jun. English.	
	4			Engineering		
TUESDAY.	1		Junior French.	Junior Math.	Drawing, &c.	
	2		Engin & Geol.*	Senior French.	Chemistry.	
	3	Engineer'ng	Analyt Chem.		Jun. English.	Math. Geol.
	4			Engineering.		
WED'DAY.	1	Physics.	Junior French.	Junior Math.	Drawing, &c	
	2	Inter. Math.	Engin & Geol.*	Senior French.		
	3	Engineer'ng	Analyt. Chem.		Jun. Eng'ish.	Geology.
	4			Engineering		
THURS.	1		Junior French.	Junior Math.	Drawing, &c.	
	2		Engin & Geol.*	Senior French.	Chemistry.	
	3	Engineer'ng	Analyt. Chem.		Jun. English.	Geol. Math.
	4			Engineering.		
FRIDAY.	1	Physics	Junior French.	Junior Math.	Drawing, &c	
	2	Inter. Math.	Engin & Geol.*	Rhetoric.	Chemistry.	
	3	Engineer'ng	Analyt. Chem.		Jun. English.	
	4			Engineering.		

Field Work in Engineering in the afternoon whenever practicable throughout the course.

* Geology during the spring term.

THE MILITARY DEPARTMENT.

FACULTY AND INSTRUCTORS.

E. M. TURNER, LL.D.,
President.

E. S. AVIS, Second Lieut. 5th Infantry, U. S. A.,
Professor of Military Science and Tactics.

Cadet Captain W. F. REYNOLDS,
Instructor in Tactics.

Cadet Captain P. A. Shaffer,
Instructor in Target and Artillery Drill.

Cadet Captain F. C. REYNOLDS,
Instructor in Tactics.

Cadet Captain F. W. CLARK,
Instructor in Tactics.

Cadet 1st Lieut. and Adjutant F. G. ROSS,
Instructor in Signaling.

Cadet 1st Lieut. T. D. LYNCH,
In Charge of New Cadets.

Cadet 2nd Lieut. J. W. FRANCIS,
Instructor in Sabre Exercise.

Cadet 2nd Lieut. C. R. DUVALL,
Assistant Instructor in Target Drill.

Cadet Principal Musician W. PIERCE,
Assistant Instructor in Signaling.

Cadet Color Sergeant H. G. STIFEL.
Assistant Instructor in Target Drill.

Instructors of New Cadets.

Cadet Sergeant-Major C. C. COFFMAN,
Cadet Quartermaster-Sergeant C. B. SISLER,
Cadet Sergeant A. B. SMITH,
Cadet Sergeant G. M. FORD,
Cadet Sergeant C. W. GORE,
Cadet Corporal H. W. SMITH.

COURSE OF INSTRUCTION

IN THE

MILITARY DEPARTMENT.

Appointment of Cadets.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to the Regent of the district in which the young man lives. The application should set forth the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The commandant of cadets, or the President, will be glad to answer any inquiry on the subject.

The following table will show the counties composing the several districts—the names of the Regents are prefixed to this catalogue:

District I. Hancock, Brooke, Ohio.
District II. Marshall, Wetzel, Marion.
District III. Ritchie, Doddridge, Harrison, Gilmer, Calhoun.
District IV. Tyler, Pleasants, Wood, Wirt.
District V. Mason, Jackson, Roane.
District VI. Putnam, Cabell, Wayne.
District VII. Lincoln, Boone, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII. Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX. Kanawha, Clay, Nicholas, Braxton, Webster.
District X. Lewis, Randolph, Upshur, Barbour, Taylor, Tucker.
District XI. Preston, Monongalia.
District XII. Hampshire, Hardy, Grant, Mineral, Pendleton.
District XIII. Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause.

Uniform.

A neat uniform of cadet gray is worn. The cap, trousers and blouse, or drill coat, constitute the uniform. Cadets will keep this in view when joining. Insignia of rank are worn on the blouse, and on the dress coat; straw hats can be worn in summer, when not on military duty.

Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term.

The University has an ample equipment for both infantry and artillery and is supplied with ammunition by the Ordance Department U. S. Army.

RESIGNATIONS AND DISCHARGE.

Cadets who do not expect to return to the corps in September, should send their resignations to the Commandant or to the President about August 15th. Those who do not intend to return and fail to send this notice, prevent some one from obtaining an appointment. It is but justice to others that their intention to stay away should be known as soon as possible.

Cadets, who, expecting to return, find themselves unable to report on the first day of the Fall term, should state their reasons in writing to the Commandant or to the President before the first day of the term, and ask for leave of absence to cover the time they will be necessarily absent.

All cadets who fail to report on the first day of the Fall term, and who have not obtained leave of absence, will be discharged and the Regent notified of the vacancy.

PRACTICAL AND THEORETICAL INSTRUCTION.

The annual course in drill for the corps, is as follows :

Fall term—Instruction of New Cadets, Company and Battalion Drill, Bayonet Exercise, etc. All officers exercise command and are inspected as in the Regular Army.

Winter term—Target Drill, Bayonet Exercise, Sabre Exercise, Manual, Setting Up, School of the Soldier, Recitations and Lectures, Signaling.

Spring term—Company and Battalion Drill, Artillery Drill, Sabre Exercise, Signaling, Target Practice, etc. Captains and members of the graduating class will command the battalion and be inspected.

Inspection will take place every Monday during the year. Dress Parades, Reviews and Guard-Mountings will take place from time to time.

Recitations for the non-commissioned officers will be held by the Captains under the general supervision of the Commandant.

Lectures will be upon the following subjects :

Arms and Amunition, Tactical and Administrative Units, Ground and Outposts, Outposts and Patrols, Reconnoitering, Marching, Ad-

vance and Rear and Flank Guards, Tactical Use of Infantry, Tactical Use of Cavalry, Tactical Use of Artillery, Tactics of the Three Arms Combined, Attack and Defence, Operations by Night, Rivers, Defiles, Villages, Woods, Convoys, Field-Works, Strategy, Customs of the Service, Official Papers, etc.

The officers and non-commissioned officers are required to exercise the command and to perform the duties of their offices as in the Regular Army. It is believed that such training will improve the young men physically and prepare them to be of great use to their country in case of need.

There has been such great interest and marked improvement in the appearance of the Corps during the past year, as to merit and recieve many favorable comments, a matter of great gratification to the Commandant and to the President.

In the Official Army Register for January, 1890, the names of J. A. Jackson and J. E. Brown, of this Univeasity, are given among the distinguished students in the Military Department of the Colleges and Universities, at last commencement, having Military Instructors detailed from the Army.

BATTALION ORGANIZATION

Commandant of Cadets.

E. S. Avis, 2nd Lieut. 5th U. S. Infantry.

Battalion Staff.

Shaffer, P. A., Captain of Artillery.
Ross, F. G., 1st Lieut. and Adjutant.

Non Commissioned Staff.

Coffman, C. C., Sergeant-Major.
Sisler, C. B., Quartermaster-Sergeant.

Drum Corps.

Ross, F. G., 1st Lieut. and Adjutant, Commanding.
Pierce, W., Principal Musician.
Lazier, A. M., Fife and Piccolo.
Hanshaw, J. E., Tenor Drum.

Color Guard.

Stifel, H. G., Color Sergeant.
Minshall, F. M., Color Corporal.
Davis, J. H., Color Corporal.
Ramsay, R. H., Color Corporal.

Company A.	Company B.	Company C.
	Captains.	
Reynolds, W. F.	Reynolds, F. C.	Clark, F. W
	First Lieutenants.	
Lynch, T. D.	Hayes, U. S. G.	Vickers, E. H.
	Second Lieutenants	
Francis, J. W.	Post, M. D.	Duvall, C. R
	First Sergeants.	
Lemley, C. McC.	Smith, E. G.	Grier, J. A
	Sergeants.	
Meyer, W. C.	Alexander, G. M.	Smith, A. B.
Ford, G. M.	Gore, C. W.	Cooper, A. B.
	Corporals	
Smith, H. W.	Davis, J. H.	Clark, J. B.
Brannon, E. A.	Vance, C. E.	Trotter, J. R.
Alexander, A. S.	Leach, E.	Holbert, J. T.
Keadle, R. L.	Martin, A. K.	Thayer, A. L.

GENERAL ROSTER OF STATE CADETS.

Those marked (g) belong to the graduating class of this year.

**County to Which Accredited.*

DISTRICT I.—J. B. SOMMERVILLE, REGENT.

	Name.	County.	When Enlisted.	Status.
1	Meyer, W. C.,	Ohio,	Aug. 31, 1887,	Present.
2	Cox, F. C.,	Ohio,	Sept. 4, 1889.	"
3	Garvin, C. E.,	Ohio,	"	"
4	McCoy, G. L.,	Ohio,	"	"
5	Morris, C. E.,	Ohio,	"	"
6	Martin, A. K.,	Barbour, *Brooke,	Feb. 22, 1890.	"

Two vacancies.

Loss.

1 Bane, B. T., Resigned Sept. 9, 1889.
2 Heiner, G. G., Graduated June 12, 1889.
3 Hughes, J. E., Resigned Jan. 18, 1890.
4 Lindemuth, L. A., Graduated June 12, 1889.
5 Lingaman, A., Resigned March 17, 1890.
6 Roemer, J. L., Graduated June 12, 1889.
7 Stoetzer, H. G., Graduated June 12, 1889.

DISTRICT II—CLARENCE L. SMITH, REGENT.

1	Clark, F. W.	(g)	Wetzel.	Nov. 13, 1886.	Present.
2	Francis, J W.,		Marshall.	Nov. 13. 1886.	"
3	Lembey, C. McC.,		Wetzel,	March 9, 1887.	"
4	Holbert, J. T.,		Marion.	Sept. 4, 1888.	"
5	White, K.,		Marshall.	Dec. 2, 1889.	"
6	Carrigan, C. E.,		Marshall.	Sept. 4, 1889,	"
7	Thomas, W. M.,		Marion.	March 11, 1890.	"

One vacancy.

Loss.

1 Fear, J. W., Resigned Dec. 20, 1889.
2 Johnson, W., Discharged March 11, 1890.
3 Rankin, Chas.,† Graduated June 12, 1889.

DISTRICT III—PEREGRIN HAYS, REGENT.

1 Post, M. D.,	Harrison.	Sept. 1, 1885,	Present
2 Lynch, T. D.,	Harrison.	Sept. 1, 1886,	"
3 Coffman, C. C.,	Harrison.	Sept. 10, 1886,	"
4 Smith, E. G.,	Harrison. *Doddridge.	Feb. 24, 1888,	"
5 Davis, J. H.,	Harrison. *Doddridge.	Sept. 5, 1888,	"
6 Wallis, E. S.,	Harrison.	Sept. 5, 1889,	"
7 Jackson, J. M.,	Harrison.	Sept. 18, 1889,	"
One vacancy.			

Loss.

1 Chorpening, G. B., Graduated June 12, 1889
2 Markey, J. N., Discharged Sept. 9, 1889.
3 Price, M. McD., Resigned Dec. 19, 1889.

DISTRICT IV—D. D. JOHNSON, REGENT.

1 Smith, H. W.,	Tyler.	Sept. 1, 1886,	Present
2 Grier, J. A.,	Wood.	March 15, 1887,	"
3 Cooper, A. B.,	Wood.	Jan. 24, 1888,	"
4 Pierpoint, P. L.,	Tyler.	Sept. 4, 1889,	"
5 Steele, G.,	Wood.	Sept. 4, 1889,	"
Three vacancies.			

Loss.

1 Johnson, J. S., Resigned March 26, 1890.
2 Ross, R. H., Resigned March 12, 1890.
3 Sivey, W. M., Discharged September 9, 1889.
4 Smith, S. A., Resigned September 20, 1889.

DISTRICT V—JOHN G. SCHILLING, REGENT.

1 Clark, J. B.,	*Jackson. Wetzel.	Sept. 5, 1888,	Present.
2 Gore, C. W.,	Harrison. *Mason.	Sept. 19, 1888,	"
3 Ramsay, R. H.,	Harrison. *Jackson.	Oct. 12, 1888,	"
4 Vance, C. E.,	Harrison. *Roane.	March 27, 1889,	"
5 Moore, J. M.,	Mason.	Oct. 23, 1889,	"
6 Nuzum, J.,	Jackson.	March 11, 1890,	"
Two vacancies.			

Loss.

1 Byrd, L. D., Discharged September 16, 1889
2 Jolliffe, W. S., Resigned October 8, 1889.
3 Reed, S. F., Resigned September 26, 1889
4 Smith, H. R., Resigned March 24, 1890.

DISTRICT VI—E. A. BENNETT, REGENT.

1	Thomas, W. J.,	Putnam,	Oct. 26, 1888,	Present.
2	Burdette, W. A.,	Cabell,	Nov. 26, 1888,	"
3	Alexander, A. S.,	Putnam,	Sept. 4, 1889,	"
4	McMillen, H. C.,	Cabell,	Sept. 4, 1889,	"
5	Lewis, W. H.,	Harrison, *Wayne,	Oct. 30, 1889,	"

Three vacancies.

Loss.

1 Brown, J. E., Graduated June 12, 1889.
2 Ferguson, L., Discharged Sept. 9, 1889.
3 Lambert, J. G., Discharged Sept. 16, 1889.
4 Musgrave, W. E., Resigned May 9, 1889.

DISTRICT VII—W. A. FRENCH, REGENT.

1	Jaco, L. M.,	Monongalia, *Boone,	October 5, 1887,	Present.
2	Pierce, W.,	Monongalia, *Lincoln,	Sept. 5, 1888,	"
3	Bennett, C. M.,	Gilmer,	Sept. 4, 1889,	"
4	Paul, J. W.,	Preston, *Mercer,	Jan. 22, 1888,	"

Four vacancies.

Loss.

1 Peck, J. E., Resigned Sept. 4, 1889.
2 Ridgeway, J. R., Discharged Sept. 9, 1889.

DISTRICT VIII—M. J. KESTER, REGENT.

1	Ford, G. M.,	Monongalia, *Monroe,	Jan. 30, 1888,	Present.
2	Leach, E.	Monroe,	Sept. 10, 1888,	"
3	Vance, J. C.,	Harrison, *Greenbrier,	Jan. 7, 1889,	"
4	Beard, H. L.,	Pocahontas,	Sept. 4, 1889,	"
5	Hogg, G.,	Mason, *Fayette,	Sept. 4. 1889,	"
6	Keadle, R. L.,	Monroe,	Sept. 4, 1889,	"

Two vacancies.

Loss.

1 Alderson, B. C., Graduated June 12, 1889.
2 Beamer, E. H., Resigned April 19, 1889.
3 Hamilton, W. A., Discharged September 9, 1889.
4 Woodson, E. E., Resigned September 4, 1889.

DISTRICT IX—D. C. GALLAHER, REGENT.

1	Reynolds, W. F., (g)	Kanawha,	Sept. 1, 1885,	Present.
2	Cunnington, J. B.,	Kanawha,	Aug. 31, 1887,	"
3	Trotter, J. R.,	Preston, *Clay,	Oct. 8, 1887,	"
4	Singleton, G. E.	Braxton,	Sept. 4, 1888,	"
5	Calvert, W. J.,	Kanawha,	Oct. 11, 1888,	"

Three vacancies.

Loss.

1 Hickman, L. P., Resigned January 1, 1890.

DISTRICT X—THOMAS J. FARNSWORTH, REGENT.

1	Hayes, U. S. G.,	Barbour,	March 26, 1885,	Present
2	Thayer, A. L.,	Taylor,	Sept. 4, 1888,	"
3	Brannon, E. A.,	Lewis,	Sept. 7, 1888,	"
4	Ward, T. H.,	Randolph,	Oct. 11, 1888,	"
5	Bennett, J. B.,	Lewis,	Sept. 4, 1889,	"
6	McWhorter, J. S.,	Upshur,	Sept. 4, 1889,	"
7	Callihan, O. C.,	Tucker,	Sept. 13, 1889,	"

One vacancy.

Loss.

1 Martin, A. K., Discharged April 11, 1889.
2 Mullins, L. A., Resigned June 1, 1889.
3 Shaffer, P. A., Resigned September 4, 1889.
4 White, R. K., Discharged September 16, 1889.

DISTRICT XI—JOSEPH MORELAND, REGENT.

1	Alexander, G. M.,	Monongalia,	Sept. 1, 1886,	Present
2	Lazier, A. M.,	Monongalia,	Sept. 5, 1887,	"
3	Wiles, J.,	Preston,	Sept. 8, 1887,	Absent sick.
4	Garlow, E. C.,	Monongalia,	Nov. 4, 1887,	Present.
5	Warman, A.,	Monongalia,	Sept. 4, 1889,	"
6	Ellis, J. R.,	Preston,	Sept. 9, 1889,	"
7	Hartman, E. T.,	Preston,	Nov. 26, 1889,	"
8	Henderson, J. L.,	Monongalia,	Feb. 12, 1890,	"

Loss.

1 Jackson, J. A., Graduated June 12, 1889.
2 Jolliffe, W. W., Resigned January 30, 1890.
3 Lazzell, J. E., Discharged September 4, 1889.

DISTRICT XII—JOHN A. ROBINSON, REGENT.

1	Reynolds, F. C.,	Mineral,	March 10, 1886,	Present.
2	Minshall, F. M.,	Mineral,	Aug. 31, 1887,	"
3	Allender, C. R.,	Monongalia, Hampshire,	Jan. 1, 1889,	"
4	Babb, M.,	Grant,	Sept. 4, 1889,	"
5	Miller, C. F.,	Mineral,	Sept. 4, 1889,	"

Three vacancies.

Loss.

1 Bayles, C. N., Discharged June 12, 1889.
2 Brady, I. P., Resigned September 9, 1889.
3 Paul, J. W., Transferred to Seventh District.
4 Phleeger, J. W., Resigned April 14, 1890.
5 Suter, J. E., Resigned April 14, 1890.

DISTRICT XIII—W. W. BROWN, REGENT.

1 Sisler, C. B.,		Monongalia,	Sept. 1, 1886,	Present.
2 Duvall, C. R.,		*Morgan, Berkeley,	Aug. 31, 1887,	"
3 Vickers, E. H.,	(g)	Jefferson,	Aug. 31, 1887,	"
4 Hanshaw, J. E.,		Wetzel,	Dec. 4, 1888,	"
5 Davenport, B.,		Jefferson.	Sept. 12, 1889,	"
Three vacancies.				

Loss.

1 McQuilkin, W., Discharged September 9, 1889.
2 Snyder, S., Discharged September 23, 1889.
3 Tabler, H. A., Discharged September 9, 1889.
4 Westenhaver, E. S., Discharged September 9, 1889.

Volunteers.

1 Ross, F. G.,	Dunkard, Pa.,	March 8, 1887,	Present.
2 Stifel, H. G.,	Wheeling, W. Va.,	Sept. 21, 1887,	"
3 Smith, A. B.,	Fayette Co. Pa.,	Sept. 10, 1888,	"
4 Hughart, G. E.,	Fayette Co. W. Va.,	Sept. 4, 1889,	"
5 Rodgers, W. D. N.,	Scottdale, Pa.,	Sept. 4, 1889.	"
6 Shaffer, P. A.,	Morgantown, W. Va.,	Sept. 4, 1889.	"
7 Smith, E. G.,	Fayette Co. W. Va.,	Sept. 4, 1889.	"
8 Smith, W. F.,	Fayette Co. W. Va.,	Sept. 4, 1889.	"
9 Oesterling, H. E.,	Wheeling, W. Va.,	Sept. 18, 1889.	"
10 Knight, C. R.,	Keyser, W. Va.,	Jan. 5, 1890,	"
11 Welton, A. J.,	Fairmont, W. Va.,	March 31, 1890.	"

Loss.

1 Beard, H. L., Appointed cadet 8th District.
2 Cornwell, W. B., Resigned April 11, 1889.
3 Dawson, J. E., Graduated June 12, 1889.
4 Echols, J. S., Resigned May 2, 1889.
5 Hansford, M. M., Resigned May 6, 1889.
6 Henderson, J. L., Appointed cadet 11th District.
7 Jolliffe, W. S., Appointed cadet 5th District.

THE LAW DEPARTMENT.

FACULTY

OF THE

LAW DEPARTMENT.

E. M. TURNER, LL.D., PRESIDENT.

ST. GEORGE T. BROOKE, LL.D.,
Professor of Common and Statute Law.

WILLIAM P. WILLEY, A. M.,
Professor of Equity Jurisprudence and Mercantile Law.

COURSE OF STUDY

IN THE

LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of Law in any part of the United States.

It aims to make not merely *theoretical* but *practical* lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Laws is conferred upon graduates in this department. By recent act of the Legislature graduates of the University Law School are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statute Law, Constitution and International Law, Commercial Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleadings and Practice.

Common and Statute Law, &c.

PROF. ST. GEORGE T. BROOKE.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, 1st Greenleaf on Evidence; and for *reference* the Code of West Virginia and subsequent Acts of the West Virginia Legislature.

The text books will be supplemented by lectures each day, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law, as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-book used in Constitutional Law is the "Fœderalist." This, however, is supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States interpreting its provisions, is also the subject of lectures.

The text book used in International Law is Woolsey's Introduction to the Study of International Law.

Equity Jurisprudence, Mercantile Law, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text books are Adams' Equity and Smith's Mercantile Law, with *reference* to Parsons, Story, and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisprudence;

Some special heads of Equity Jurisprudence,

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the law relating to Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property—Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

Terms and Topics

Three terms constitute the school year, and the entire course of instruction is covered by the lectures within the year, thus enabling the student to complete the course and become a candidate for graduation at the end of that period. A majority of the students do so: but it is optional with the student to give one year or two to the course. This must be determined by the degree of culture and the qualifications of the student when commencing the course. Many students prefer to take two or three branches of study in the Academic Department in connection with their law studies and divide the law course into two years, which is always advisable if the student is deficient in general culture, and preparation for the course.

The Two Years Course.

When dividing the course into two years, the first year will include Blackstone's Commentaries and the statute law of the State—lectures

three times a week—together with Commercial law three times a week in Fall and Spring terms; to which may be added, if the student is competent, Constitutional or International law.

As one term is not much dependent upon another as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter at the beginning of the Fall term if possible.

The work of the year is divided among the three terms, as follows

FALL TERM.

Rights of Persons and Things—Blackstone. International Law. Common Law Pleading. Evidence.	PROF. BROOKE.
Contracts. Negotiable Instruments. Equity Pleading.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. International Law. Blackstone, 1st and 2d books (continued). Blackstone, 3d and 4th books (begun).	PROF. BROOKE.
Agency. Partnership. Suretyship and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, &c.	PROF. WILLEY.

SPRING TERM.

Constitutional Law (continued). Criminal Law, &c., Blackstone, 3d and 4th books (continued). Real Property.	PROF. BROOKE.
Bailments. Corporations. Practice in the Courts. Insurance. Equity.	PROF. WILLEY.

Methods of Instruction.

The methods of instruction consist of Lectures and Examinations from approved text books read in course; the drawing of the various legal papers requisite in the ordinary practice of the law; the Moot Courts.

Each day before the lecture, there is an oral examination on the

subject of the lecture of the preceding day, and of such portions of the text books as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed; and for candidates for graduation a review examination on the entire course. They will all be in writing.

Moot Courts.

However familiar the student may be with the text books and with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the Bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits, draw papers, pleadings, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the arguments, charge, verdict, motion in arrest of judgment, writ of error, &c. The Moot court is organized and conducted in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the Bar as gentlemen as well as lawyers.

Requirements for Admission and Degrees.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures. If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

In September of each year an examination in the ordinary English branches will be held by the two law Professors and the President of the University, of all students who are candidates for the degree of Bachelor of Laws during that year. Any student found deficient at this examination will be required to pursue those branches in the classes of the University, in connection with his law studies. The examination will include the correct writing of ordinary English.

The degree of Bachelor of Laws will be conferred only upon those who are able to pass a rigid examination upon the entire course. The value of a diploma from this department will never be impaired by conferring it where it is not merited and has not been fairly won.

No degree will be conferred on any student who has not been in attendance upon the lectures for at least nine months, no matter what his previous reading may have been.

Expenses.

The tuition fee in the Law Department is $8.00 per term

The ordinary expenses for boarding, &c., are quite as low as at any other University town in the United States.

A summary of the expenses of boarding, &c., as given on a preceding page of this catalouge, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Cost of Books.

The text books essential to the successful prosecution of the work of the law school are the following, namely: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence (Vol. I.), Smith's Mercantile Law, Adams' Equity, The Fœderalist, Woolsey's Constitutional Law.

The cost of these books, if purchased new, is about $30.00. They can be obtained "second-hand" at from $12.00 to $15.00. Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be overestimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course; the active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar the books are thrown aside, and that thor-

ough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining; and it produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

Any information relative to this department will be cheerfully given in reply to inquiries.

A Summer Course.

A private course of Law Lectures is given by Prof. Brooke during the vacation at the University, beginning about the middle of June and continuing eight weeks.

The subjects embraced in these lectures are the rights of persons and of property, and the elementary principles of Pleading and of Practice.

No text books except Blackstone's Commentaries required: Warth's latest Code desirable as a book of reference.

TERMS—$20, strictly in advance, for the entire course. For further particulars apply to PROF. ST. GEORGE T. BROOKE.

THE PREPARATORY DEPARTMENT.

FACULTY.

E. M. TURNER, LL. D., PRESIDENT.
Instructor in Rhetoric.

A. W. LORENTZ, A. M. PRINCIPAL,
Instructor in Latin and Book-keeping.

JAMES S. STEWART, M. S.,
Assistant Professor and Instructor in Mathematics.

A. J. HARE, A. B.,
H. G. STŒTZER, A. B.,
Assistant Instructors.

PREPARATORY DEPARTMENT.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. The Preparatory Department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity for this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of collegiate study proper, or shutting out from the advantages of the University many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

Course of Study.

The course of study in the Preparatory Department aims to prepare young men for admission to the higher classes in the University, and to fit those who do not des're totake the full course, for the business of life.

Candidates for entrance should be at least fifteen years old and should have *thoroughly* accomplished the ordinary course of study in the common schools of the State.

No special examination is required for entrance into the Junior class of the Preparatory school. Students are classed according to their apparent advancement, and are admitted *on trial* for the first term. The following rule has been adopted on this subject by the Faculty:

All students in the junior preparatory studies, who fail to make an *average standing* of 6 on a scale of 10, at the examination at the close of the first (or Fall) term, shall be dropped from the school; and all in the senior preparatory classes who fail to make an average of 6 *in any study* at the end of the first (or Fall) term, shall be required to go into the first preparatory class in such study.

Junior Year.

FALL TERM.

Arithmetic—Greenleaf's Complete—from Common Fractions to Discount.....5 hours a week
English Grammar—(Swinton)—Etymology.....5 hours a week
Latin (commenced).....5 hours a week

WINTER TERM.

Arithmetic (completed).....3 hours a week
Eng. Grammar—Syntax and English Comp.....5 hours a week
Latin—Grammar and Reader—Chase & Stuart.....5 hours a week
Algebra—Well's Academic—to Fractions.....2 hours a week

SPRING TERM.

Algebra—Well's Academic (completed).....5 hours a week
Eng. Grammar—Anal., Pros., and Eng. Com.....5 hours a week
Latin—Grammar and Reader.....5 hours a week

NOTE—Students in the Junior year of the Preparatory are not allowed to take any other studies than the above.

Senior Year.

FALL TERM.

Algebra—Well's University—Fractions to Imaginary Quantities.....2 or 3 hours a week
Cæsar (two books)—Latin Grammar.....5 hours a week
Greek—Grammar and Reader (Goodwin).....5 hours a week
Geometry—Wells'—Books 1 and 2.....3 or 2 hours a week
Book-keeping.....3 hours a week

WINTER TERM.

Algebra, Imaginary Quantities to Binomial Theorem.....2 or 3 hours a week
Cicero's Orations (three orations)—Chase & Stuart's Grammar.....5 hours a week
Greek—Grammar and Reader.....5 hours a week
Geometry—Books 3, 4 and 5.....3 or 2 hours a week
Book-keeping (completed).....3 hours a week

THIRD TERM.

Algebra (completed).....3 or 2 hours a week
Geometry (completed).....2 or 3 hours a week
Virgil—Three Books of Æneid; Latin Grammar.....5 hours a week
Xenophon's Anabasis (two books), Greek Grammar..5 hours a week
English Composition, Punctuation, &c.....3 hours a week

Note.—Candidates for the degree of Bachelor of Sciences are not required to take Greek. Candidates for the degree of Bachelor of Arts are not required to take Book-keeping.

Normal School Certificates.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University. Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the Principal of the school, to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

Approved High Schools.

In order to secure the higher usefulness of the West Virginia University to the young men of the State, as well as to encourage the establishment of high schools and academies in the various sections and counties thereof, the Faculty of the University have adopted the following plan which they submit for the consideration of those interested in the work of higher education in this State.

It is confidently believed that this scheme, if generally encouraged, will, in a few years, result in the establishment of good preparatory schools and academies in various parts of the State, where not only many of those who will go to the University may get their preparatory training at less expense, but also many teachers in the primary schools will be enabled to get that additional knowledge and training so necessary to the successful prosecution of the work of primary teaching. Thus the whole public school system may be elevated and sustained on a high plane, and the expenditure for public school instruction made productive of better results than can be attained under existing circumstances. The plan is as follows:

Any high school, graded school or academy may be approved by the West Virginia University as a preparatory school by complying with the following conditions:

1st. By establishing, in addition to the usual primary and grammar grades, a course of study the same as that pursued in the Preparatory Department of the University, or its equivalent, under the instruction of competent teachers.

2d. By making application to the Faculty of the University for a visiting committee to examine the methods and work of such school for the purpose of ascertaining the character of the instruction given.

3d. Upon such application a committee of the Faculty, not exceeding two in number, will be appointed to visit such school, and upon favorable report from such committee the Faculty will approve such school as a preparatory school for a term of four years. The expenses of the committee will be paid, one-half by the University, the other half by the school making application.

4th. This approval will entitle the students who complete the prescribed preparatory course of study in such school, to enter the Collegiate Department of the University without examination, upon the certificate of the Principal of such school that students have, within the fifteen months next preceding their coming to the University,

completed the course and passed an examinatien thereon with a standing of 7 in a scale of ten.

5th. The Faculty reserve the right to withdraw such approval, if, after the admission of students, the character of the work done at such school shall be found to be below the standard required for admission to the University classes, or if certificates are given to students who, having been found deficient after their admission, can not pass a fair test examination in the prescribed courses of preparatory studies.

6th. At the expiration of the term of four years, the approval may be renewed upon application, if the work previously done has been satisfactory.

A list of the schools approved by the University will be published from time to time in the annual catalogue.

The co-operation of those interested in the work of higher education, who believe in building up our own institutions, is earnestly solicited in developing and encouraging this scheme.

The following schools have been approved under this plan .

Linsley Institute, Wheeling ; Parkersburg High School (except Greek) ; Western Pennsylvania Classical and Scientific Institute, Mt. Pleasant, Pa. ; Normal and Classical Academy, Buckhannon, W. Va. ; Greenbrier Academy, Alderson, W. Va.

GENERAL CATALOGUE OF STUDENTS.

[NOTE—In designating the department in which students are studying the following abreviations are used: Pre.—Preparatory; Coll.—Collegiate; Engin. Engineering.]

Name.	Residence.	Classes.
Alexander, Andrew Sterrett	Frazier's Bottom, Putnam co	Law.
Alexander, George Milton	Morgantown	Coll.
Allen, Robert E. Lee	Lima, Tyler co	Prep. and Coll.
Allender, Clarence Roy	Morgantown	Prep.
Babb, Maeker	Medley, Grant co	Prep.
Baker, Mary Lieurena	Morgantown	Coll.
Bane, Frank Boyd	Short Creek, Brooke co	Prep.
Beard, Harry Lee	Huntersville, Pocahontas co	Prep. and Coll
Bennett, Cary M	Bennett, Gilmer co	Prep. and Coll.
Bennett, John Brannon	Weston, Lewis co	Prep.
Brand, Harvey	Monongalia co	Coll.
Brannon, Edward Arnold	Weston, Lewis co	Coll.
Brown, Charles Newton	Webster, Taylor co	Prep.
Brown, Frank Myrtle	Morgantown	Prep.
Brown, Mary Louvinia	Preston co	Coll.
Burdett, William Alexander	Ona, Cabell co	Prep. and Coll
Burley, James Lindsey	Moundsville, Marshall co	Coll.
Butcher, Lewella	Troy, Gilmer co	Coll.
Cable, Albert Walter	Pittsburgh, Pa	Prep.
Callahan, Otho	St. George, Tucker co	Prep.
Calvert, William Joseph	St. Albans, Kanawha co	Prep.
Carney, John Joseph	Jacksonville, Lewis co	Prep. and Coll.
Carrigan, Charles Edgar	Sherrard, Marshall co	Prep.
Casselberry, John Logan	Morgantown	Prep.
Chambers, Arthur Wellington	Terra Alta, Preston co	Prep.
Champe, Ira P	Charleston, Kanawha co	Prep. and Coll.
Chapman, Walter	Hartford City, Mason co	Prep.
Chipley, James Edwin	Moorefield, Hardy co	Law.
Clark, Josephus B	New Martinsville, Wetzel co	Prep. and Coll
Clark, Frank Wells	New Martinsville, Wetzel co	Coll.
Coffman, Carroll Clair	Bridgeport, Harrison co	Engin.
Cole, Gideon	Morgantown	Prep. and Coll.
Collier, Ewing Longnecker	Fairchance, Pa	Prep. and Coll.
Cooper, Arthur Benjamin	Parkersburg	Coll.
Corbin, Jefferson D	Morgantown	Coll.

Name.	Residence.	Classes.
Corbin, James Madison	Highland, Ritchie co	Prep. and Coll.
Corbly, Lawrence J.	Ripley's, Tyler co	Coll.
Cox, Frank Clay	West Liberty, Ohio co	Prep. and Coll.
Cummings, Thomas Ignatius	Camden, Lewis co	Coll.
Cunningham, John Benedict	St. Albans, Kanawha co	Coll.
Davenport, Braxton	Charlestown, Jefferson co	Coll.
Davis, James Ewing	Maidsville, Monongalia co	Coll.
Davis, James Horner	Clarksburg	Prep. and Engin.
Dawson, William Clark	Morgantown	Coll.
Dille, Thomas Reay	Morgantown	Prep.
Dorsey, George Frederick	Morgantown	Prep.
Duval, Charles Raymond	Martinsburg	Coll.
Echart, Bruce Milton	Easton, Monongalia co	Prep. and Coll.
Echart, Thomas Layton	Easton, Monongalia co	Coll.
Eddy, William J	Cross Roads, Monongalia co	Coll.
Ellis, Joseph Rolly	Newburg, Preston co	Prep. and Coll.
Fear, John William	Hoodsville, Marion co	Prep.
Fleming, Richard Lee	Cassville, Monongalia co	Prep. and Coll.
Ford, George Michael	Kasson, Barbour co	Coll.
Fortney, Loraine	Independence, Preston co	Prep. and Coll.
Francis, John Wiley	Moundsville, Marshall co	Coll.
Fullerton, Alexander Barrett	Morgantown	Prep.
Fullerton, James Gregory	Morgantown	Prep.
Galford, John Everett	Walkersville, Lewis co	Coll.
Garlow, Ezra Clark	Maidsville, Monongalia co	Engin.
Garrett, Frank H	Bristol, O	Law.
Garvin, Charles Edwin	Wheeling, Ohio co	Prep.
Gore, Claude Webster	Clarksburg, Harrison co	Coll.
Gorman, Michael	Morgantown	Prep.
Graham, Samuel Willey	Masontown, Preston co	Prep. and Coll.
Gregg, Jesse Wilbur	Morgantown	Prep.
Grier, John Alexander	Parkersburg, Wood co	Coll.
Hackney, Ida Esther	Morgantown	Coll.
Hackney, Joseph Milton	Morgantown	Coll.
Hackney, Lilian May	Morgantown	Coll.
Hagans, Elizabeth Ludington	Morgantown	Coll.
Hanshaw, James Edgar	Burton, Wetzel co	Prep. and Coll.
Hartman, C. Milton	Morgantown	Prep.
Hartman, Edward Thornton	Tunnelton, Preston co	Prep. and Coll.
Hartman, William Ellsworth	Easton, Monongalia co	Prep. and Coll.
Hayes, Thomas Wilford	Morgantown	Prep.
Hayes, Ulysses S. Grant	Belington, Barbour co	Coll.
Henderson, Joseph Lindsey	Monongalia co	Prep.
Henry, Emery Marclen	Uffington, Monongalia co	Coll.
Hickman, Lanty Porter	Wattsville, Clay co	Prep.
Hite, Bert Holmes	Morgantown	Coll.
Hogg, Byron	Point Pleasant, Mason co	Prep.
Hogg, Gory	Sewell Depot, Fayette co	Prep.
Holbert, John Thomas	Watson, Marion co	Prep. and Coll.
Holden, William Jackson	Craigmoor, Harrison co	Prep. and Coll.
Houston, Hough	Easton, Monongalia co	Coll.
Hughart, John Ewing	Sewell Depot, Fayette co	Prep.
Hughes, John Ellsworth	Wheeling, Ohio co	Prep and Coll.
Hunter, Charles Olan	Stewartstown, Monongalia co	Prep.
Iijima, Zentaro	Saitamaken, Japan	Prep. and Engin.
Jackson, James Madison	Clarksburg, Harrison co	Prep.
Jaco, S. Milton	Easton, Monongalia co	Coll.
Jacobs, Elmer Forrest	Morgantown	Prep. and Engin.
Jamison, David Lee	Morgantown	Law.
Jamison, Wilson Crowl	Morgantown	Prep.
Jenkins, Samuel Royal	Grafton, Taylor co	Prep. and Coll.

Name.	Residence.	Classes.
Johnson, James Martin	Long Reach, Tylor co.	Prep.
Johnson, James Stephenson	Charleston, Kanawha co	Prep.
Johnson, William	Mannington, Marion co	Prep.
Joliffe, William Sherman	Morgantown	Prep.
Joliffe, Worth Worthington	Uffington, Monongalia co	Engin.
Kauroku, Waichiro	Saitamaken, Japan	Law.
Keadle, Robert Lee	Union, Monroe co	Law.
Knight, Charles Ridgely	Keyser, Mineral co	Prep.
Krebs, Charles Edward	New Martinsville, Wetzel co	Prep. and Coll.
Lazier, Arthur Moreland	Morgantown	Prep. and Coll.
Lazzell, Ulysses S. Grant	Monongalia co	Prep.
Leach, Elmer	Wolf Creek, Monroe co	Engin.
Lemley, Cassius McCarl	Burton, Wetzel co	Engin.
Lewis, Thomas Evan	Wheeling, Ohio co	Prep. and Coll.
Lewis, William Hay	Clarksburg, Harrison co	Prep.
Lingaman, August Albert	Wheeling, Ohio co	Prep.
Lynch, Tillman Davis	Craigmoor, Harrison co	Engin.
Lynch, Waitman Elliott	Craigmoor, Harrison co	Prep.
Lyon, Harriet E	Fredonia, N. Y	Coll.
Luke, Robert	Wheeling, Ohio co	Prep.
Madagan, Wm. Christian	Morgantown	Prep.
Martin, Andrew Kent	Philippi, Barbour co	Prep. and Coll.
Martin, Robert Bruce	Fairmont, Marion co	Law.
McCoy, Charles Waner	Ravenswood, Jackson co	Law.
McCoy, George Loren	Wheeling, Ohio co	Prep. and Coll.
McGrew, James Heermans	Morgantown	Prep.
McMechen, William Benson	McMechen, Marshall co	Prep. and Coll.
McMillan, Herbert Chalmers	Huntington, Cabell county	Prep.
McWhorter, John Scott	Buckhannon, Upshur co	Prep. and Coll.
Meyer, William Charles	Wheeling, Ohio co	Coll.
Miller, Charles Frederick	Keyser, Mineral co	Prep.
Minshall, Frederick Mortimer	Piedmont, Mineral co	Coll.
Moore, Frederick	Belington, Barbour co	Prep. and Coll.
Moore, John Morgan	Pt. Pleasant, Mason co	Prep.
Moore, Frederick	Belington, Barbour co	Prep. and Coll.
Morgan, Robert Horatio	Laurel Point, Monongalia co	Prep.
Morris, Clifton Elias	Pleasant Green, Ohio	Coll.
Morrison, Charles Horner	Braxton C. H	Prep.
Nicholas, Maunsell	Volcano, Wood co	Prep.
Norris, Sarah	Glenville, Gilmer co	Coll.
Nuzum, John	Garfield, Jackson co	Prep. and Coll.
Oesterling, Harry Edward	Wheeling, Ohio co	Prep.
O'Hara, Thomas Michael	Gladesville, Preston co	Prep. and Coll.
Parsons, James Marcellus	St. George, Tucker co	Prep.
Paul, James Washington	Newburg, Preston co	Prep. and Coll.
Phleeger, John Winter	Piedmont, Mineral co	Prep. and Coll.
Pickenpaugh, James Clark	Morgantown	Prep.
Pierce, Warren	Morgantown	Prep. and Coll.
Pierpoint, Pliny Lewis	Sistersville, Tyler co	Prep.
Post, Melville Davisson	Romine's Mills, Harrison co	Coll.
Price, Marcy McDonnell	Clarksburg, Harrison co	Prep. and Eng.
Price, Otella V	Morgantown	Coll.
Prince, Frank Alfred	Quinnimont, Fayette co	Prep.
Protzman, Jesse	Morgantown	Prep.
Ramsey, Robert Hudson	Clarksburg, Harrison co	Prep.
Reay, David Chadwick	Granville, Monongalia co	Prep.
Reynolds, Carson Howell	Morgantown	Prep.
Reynolds, Frank Cornelius	Keyser, Mineral co	Coll.
Reynolds, Mabel Curry	Morgantown	Coll.
Reynolds, Wayland Fuller	Morgantown	Coll.
Rice, Ernest Effort	Morgantown	Prep.

Name.	Residence.	Classes.
Ridgeway, Charles Nelson	Maidsville, Monongalia co	Prep.
Rogers, Walter Dudley Neil	Scottdale, Pa	Prep. and Coll.
Ross, Florian Gale	Dunkard, Pa	Engin.
Ross, Raphael Herbert	Waverly, Wood co	Coll.
Russell, Bennie Watson	Morgantown	Prep.
Schmeid, James Daniel	New Martinsville, Wetzel co	Prep. and Coll.
Shaffer, Phil. A	Morgantown	Engin.
Sheppard, Addison Hite	Reedy Ripple, Wirt co	Coll.
Singleton, George Edwin	Salt Lick Bridge, Braxton co	Coll.
Sipe, Stanton Dull	Mill Run, Pa	Prep.
Sisler, Charles Benton	Stewartstown, Monongalia co	Coll.
Sisler, Millard Talford	Stewartstown, Monongalia co	Prep. and Coll.
Smith, Andrew Brown	Uniontown, Pa	Coll.
Smith, Edward Grandison	West Milford, Harrison co	Prep. and Coll.
Smith, Elbert Walter	Sewell's Depot, Fayette co	Prep.
Smith, Harry Rankin	Clarksburg, Harrison co	Prep.
Smith, Harry William	Ripley's, Tyler co	Coll.
Smith, William Fountain	Sewell's Depot, Fayette co	Prep.
Smith, Sidney Austin	Shirley, Tyler co	Prep. and Coll.
Snider, Frank	Easton, Monongalia co	Engin.
Steed, Harry Alfred	Newark, Wirt co	Prep.
Steele, Gardner	Parkersburg, Wood co	Prep.
St. Clair, William E	Morgantown	Prep.
Stifel, Henry George	Wheeling, Ohio co	Coll.
Summerfield, Charles Reese	Gatewood, Fayette co	Law.
Suter, John Ellsworth	Piedmont, Mineral co	Prep. and Coll.
Teter, William Steel	Belington, Barbour co	Prep. and Coll.
Thayer, Arthur Love	Grafton, Taylor co	Prep. and Coll.
Thomas, William Josias	Red House, Putnam co	Prep. and Coll.
Thomas, William Marion	Farmington, Marion co	Prep.
Tower, Charles Asaiel	Oakland, Md	Coll.
Trotter, James Russell	Aurora, Preston co	Coll.
Vance, Cyrus Earl	Clarksburg, Harrison co	Prep.
Vance, John Carl	Clarksburg, Harrison co	Prep.
Vaughan, Amos Calvin	Kanawha Station, Wood co	Prep.
Vickers, Enoch Howard	Shepherdstown, Jefferson co	Coll.
Wade, Charles	Morgantown	Prep. and Coll.
Wallis, Edward Steel	Clarksburg, Harrison co	Prep.
Ward, Tucker Hutton	Huttonsville, Randolph co	Coll. and Law.
Warman, Altha	Morgantown	Coll.
Welton, Archibald James	Fairmont, Marion co	Prep.
White, Bennett H. Lexton	Morgantown	Prep.
White, Charles Lewis	Morgantown	Coll.
White, DeWitt	Morgantown	Coll.
White, Kemble	Belton, Marshall co	Prep.
White, Prescott Cushing	Morgantown	Coll.
Wiles, John William	Aurora, Preston co	Coll.
Williamson, Thomas Daniel	Wiley, Pa	Prep.
Woodson, Elmon Edwin	Beckwith, Fayette co	Coll.
Yost, Walter Burt	Oakland, Md	Prep.
Zearley, Edmund Lee	Point Marion, Pa	Engin.

COUNTIES OF WEST VIRGINIA REPRESENTED.

Barbour 6, Berkeley 1, Braxton 2, Brooke 1, Cabell 2, Clay 1, Fayette 7, Gilmer 3, Grant 1, Hardy 1, Harrison 16, Jackson 2, Jefferson 2, Kanawha 4, Lewis 5, Marion 6, Marshall 5, Mason 3, Mineral 6, Monongalia 66, Monroe 2, Ohio 10, Pocahontas 1, Preston 10, Putnam 2, Randolph 1, Ritchie 1, Taylor 3, Tucker 2, Tyler 6, Upshur 1, Wetzel 6, Wirt 2, Wood 6.

Total 193

RECAPITULATION BY STATES AND COUNTRIES.

West Virginia	193
Pennsylvania	8
Maryland	2
Ohio	2
Japan	2
New York	1
Total enrollment for the year	208

(Largest former enrollment, 195.)

DISTRIBUTION BY DEPARTMENTS.

Collegiate	59
Engineering	10
Law	10
Preparatory and Collegiate	47
Preparatory and Engineering	4
Preparatory	78

BACHELOR OF ARTS COURSE—WEEKLY SCHEDULE—(*Elective Studies in Italics.*)

FIRST YEAR.

Hr	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Sat.
8½	Physics.		Physics.		Physics.	Virgil, Horace, Cicero.
9½	Herodotus; Homer.	Herodotus; Homer.	Herodotus; Homer.	Virgil; Horace; Cicero.	Virgil, Horace, Cicero.	
10½	‡Trig. & Analyt. Geom.	‡Trig. & Analyt. Geom.	‡Trig. & Analyt. Geom.	‡Trig. & Analyt. Geom	‡Trig. & Analyt. Geom.	
11½	‡English; §Polit. Econ.	‡English; §Polit. Econ.	‡English; §Polit. Econ.	‡English; §Polit. Econ.	‡English; §Polit Econ.	

‡Fall and Winter terms only. §Spring term.

SECOND YEAR.

Hr.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	
8½	Xen.; Plato; Euripedes.	Xen.; Plato; Euripides.	Livy; Horace; Cicero.	Livy; Horace; Cicero.	Livy; Horace; Cicero.	
9½	History.		History.		History.	
10½	Rhetoric.				Rhetoric.	
11½	‡Chemistry (Inorg.)	‡Chemistry (Inorg.)	Xen.; Plato; Euripides.	‡Chemistry (Inorg.)	‡Chemistry (Inorg.)	

‡Fall and Winter terms only. Fields' Botany during Spring term at 7 30 a. m.

THIRD YEAR.

Hr.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	
8½	§Psychology; ‡Logic.	§Psychology; ‡Logic.	§Psychology; ‡Logic.	§Psychology; ‡Logic.	§Psychology; ‡Logic.	
9½	§Zoology; ‡Geology.	§Zoology; ‡Geology.	§Zoology; ‡Geology.	‡Geology.		
10½	§Engl. Lit; ‡Polit. Econ.	§Engl. Lit; ‡Polit. Econ.	§English Lit.; ‡Polit. Econ.	§English Lit.; ‡Polit. Econ	§English Lit; ‡Polit. Econ.	
11½	*Tacitus; Juvenal; German*	*Tacitus; Juvenal; German.*	*German.*	*Demos; Soph.; Thucyd; German.*	*Demos; Soph; Thucyd; German.*	

§Fall and Winter terms. ‡Spring term only.

FOURTH YEAR.

Hr.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	
8½	*German.*	*Anglo-Saxon.*	*German.*	*Anglo Saxon.*	*German.*	
9½	*French.*	*Political Science; French.*	*French.*	*Political Science; French*	*French.*	
10½	Anatomy; Phys.; Hygien.	Anat; Phys.; Hygiene.	Anat. Phys. Hygiene.	Anat.; Phys.; Hygiene.	*Anat.; Phys.; Hygiene.*	
11½	Ethics: Theism.	Ethics: Theism.	Ethics: Theism.	Ethics: Theism.	Ethics: Theism.	
8½		‡Geology.	‡Geology.	‡Geology.		

‡Spring term only.

BACHELOR OF SCIENCE COURSE—WEEKLY SCHEDULE.—(*Elective Studies in Italics.*)

FIRST YEAR.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
8½	Physics.		Physics.		Physics.
9½	French: Gram. and Read.	French: Gram. and Read	French: Gram and Read	French: Gram. and Read.	French: Gram. and Read.
10½	Trig.: Analyt. Geom.; *Des. Geom.	Trig.: Analyt. Geom.; *Des Geom.	Trig: Analyt. Geom.; *Des. Geom.	Trig: Analyt. Geom.; *Des. Geom.	Trig.: Analyt. Geom.; *Des Geom.
11½	English: *Polit. Economy.	English: *Polit. Economy	English: *Polit. Economy.	English: *Polit. Economy	English: *Polit Economy.

*Spring Term only.

SECOND YEAR.

Hour	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
8½	*Calculus: †Analyt. Mech.		*Calculus: †Analyt. Mech		*Calculus: †Analyt. Mech.
9½	*History.*		*History.*		*History.*
10½	Rhetoric.	French.	French	French.	French.
11½	Chemistry (Inorg. & †Org.)	Chemistry (Inorg. & †Org.)		Chemistry (Inorg & †Org.)	Chemistry (Inorg. & †Org.)

*Fall and Winter Terms. †Spring Term. Field Botany during Spring Term at 7.30 A. M.

THIRD YEAR.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
8½	†Psychology; *Logic.	†Psychology; *Logic.	†Psychology; *Logic.	†Psychology; *Logic.	†Psychology; *Logic.
9½	†Zoology; *Geology.	†Zoology; *Geology.	†Zoology; *Geology.	†Struct. Bot; *Geology.	†Struct. Bot.
10½	*Engl. Lit.; Polit. Economy.*	*Engl. Lit.; Polit. Economy*	*Engl. Lit.; Polit. Economy*	*Engl. Lit.; Polit. Economy.*	*Engl. Lit.; Polit. Economy.*
11½	German: Gram. & Reader.	German: Gram. & Reader.	German: Gram. & Reader	German: Gram. & Reader	German: Gram. & Reader
3½		Analyt. Mech: Astron.		Analyt. Mech.: Astron.	

†Fall and Winter Terms. *Spring Term only.

FOURTH YEAR.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
8½	German	Agriculture	German.	Agriculture.	German.
9½	Analyt. Chem. (Optional)	Analyt. Chem. (Opt'nal.) *Polit. Science.*	Analyt. Chem. (Optional.)	Analyt. Chem. (Opt'nal) *Polit. Science.*	Analyt. Chem. (Opt'nal.) *Polit. Science.*
10½	Anat., Phys. & Hygiene.	Anat., Phys. & Hygiene.	Anat., Phys. & Hygiene.	Anat., Phys. & Hygiene.	Anat., Phys. & Hygiene.
11½	Ethics: Theism	Ethics: Theism.	Ethics: Theism.	*Ethics: Theism.	Ethics: Theism.
3½		*Geology.	*Geology.	*Geology	

*Spring Term only.

Schedule of Recitations—University Department—Chapel Exercises at 8:15 A. M.

	8:30 A. M.	9.30 A. M.	10.30 A. M.	11.30 A. M.	3.30 P. M
Monday.	Physics. Junior Metaph. Inter. Math. Senior German. Inter. Greek. Engineering. Law.	Junior French. History. *Zoology. Junior Greek. Analyt. Chem. Engineering. Law.	Junior French. Rhetoric. Anatomy, &c. Senior English. Engineering. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Lat. Drawing, &c. Law.	
Tuesday.	†Agriculture. Junior Metaph. Anglo-Saxon. Inter. Greek. Engineering. Law.	Junior French. Political Science. *Zoology. Junior Greek. Analyt. Chem. Engineering. Law.	Junior Math. Engineering. Anatomy, &c. Senior English. Senior French. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Latin. Drawing, &c. Law.	Geology. (II) Senior Math. Practical Physics.
Wed.	Physics. Junior Metaph. Inter. Math. Senior German. Inter. Lat. Engineering. Law.	Junior French. History. *Zoology. Junior Greek Analyt. Chem. Engineering. Law.	Junior Math. Engineering. Anatomy, &c. Senior English. Senior French. Law.	Junior English. Inter. Greek. Junior German. Senior Metaph. Drawing, &c. Law.	
Thurs.	†Agriculture. Junior Metaph. Anglo-Saxon. Engineering. Inter. Latin. Law	Junior French. Political Science. *Structural Bot. Junior Latin. Analyt Chem. Engineering. Law.	Junior Math. Engineering. Anatomy, &c Senior English. Senior French. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Greek. Drawing, &c. Law.	Geology. (II). Senior Math. Practical Physics.
Friday.	Physics Junior Metaph. Inter. Math. Senior German. Inter. Latin. Engineering. Law.	Junior French. History. *Structural Bot. Junior Latin. Analyt. Chem. Engineering Law.	Junior French. Rhetoric. Anatomy, &c. Senior English. Engineering. Law.	Junior English. Chemistry. Junior German. Senior Metaph. Senior Greek. Drawing, &c. Law.	
Sat		Junior Latin.			

Field Botany during the Spring term, at 7 30 A. M. *Fall and Winter terms. Geology during the Spring term. †Fall and Winter terms. Drill at 4 30 P. M. on Monday, Tuesday, Wednesday and Thursday. Field work in Engineering in the afternoon, when practicable.

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

Station Staff.

JOHN A. MYERS, PH. D., Director.

A. C. MAGRUDER, B. S., Creamery-man.

H. R. BALDWIN, JR., - Chemist.

C. F. MILLSPAUGH, M. D., Botanist and Microscopist.

A. D. HOPKINS, - Special Agent in Entomology.

S. V. MAYERS, - - Stenographer.

This Station was organized in June, 1888, by the Board of Regents of the West Virginia University, accepting the Congressional appropriation, electing a Director, outlining the policy it wished pursued, and appointing a committee of its body to perfect the organization. Since then, a building has been completed for the Station, which gives ample room for the laboratories, offices, libraries, etc., belonging to the Station. It is provided with well equipped chemical, microscopical and botanical laboratories, and also with an experimental creamery. Great stress is being laid upon the development of the dairy business in this State by the Experiment Station, and the advantages of this industry are being presented to the farmers of the State in bulletins prepared especially upon this industry and the scientific questions connected with it, and by lectures and addresses at farmers' meetings in many sections of the State. A careful scientific study of the problems connected with this industry has been undertaken, which will cover the investigation of milk with reference to its

manufacture into butter and cheese, and the utilization of the by-products. In connection with this, some experimental work has been done in pig feeding, and in testing the adaptability of grains and fruits to the various sections of the State. The Botanist of the Station will be occupied in studying the grasses and forage crops of the State, and in extending our general knowledge of the flora of the State. A special agent is also engaged in studying the insect pests of the State, and in applying the proposed methods for combating them.

The objects of the Station are stated as follows in the act establishing it:

"That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotating cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analsis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

Many of the farmers seem to be under the impression that it is to be a seed distributing bureau, and we have had many applications for seeds, fertilizers, etc., from parties who do not seem to understand the duties of the Experiment Station as stated in the law organizing it. It will be well for all to understand that at present there are no seeds, fruit trees, or anything of this character to be distributed from this Station. There is, also, no provision by which the citizens of the State should expect scientific investigations carried out which bear solely upon private interests, such as analyses of minerals, mineral waters, etc., and the Station does not expect to undertake such work. We shall, however, hold ourselves in readiness, so far as lies within our power, to carry out the objects of the law, and it is hoped that the public will recognize that neither the Board of Regents nor any one connected with the Station has any power to expend the funds in directions other than those provided for by the law.

The students have free access to the Station, and those who are sufficiently advanced may become acquainted with its processes of investigation, and use its library, or study practical dairying, free of charge. The work of the Station, however, is not intended to be in the form of instruction, and persons wishing to work in the Station building with any of the investigators must be subject to such regulations as may be prescribed; work in the Station having no relation whatever to the course of college studies.

CATALOGUE

OF

WEST VIRGINIA UNIVERSITY

MORGANTOWN

FOR THE YEAR 1890-1.

CHARLESTON
MOSES W. DONNALLY, PUBLIC PRINTER.
1891.

CALENDAR.

June, 1891---February, 1893.

1891	S	M	T	W	T	F	S
JUNE.	....	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	...	.....	...	...
	....	....	....	....	....	....	....
JULY.	....	..	....	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	.....
	....	....	....	....	....	....	....
AUGUST	....	....	....	....	....	...	1
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	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	...	....	....	....	....
SEPT.	....	....	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	...	.....	.....
	....	...	....	....	....	....	....
OCT	....	..	....	.	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
	....	....	....	....	....	....	....
NOV.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
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DEC.	...	.....	1	2	3	4	5
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	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	...	.....
	....	....	....	....	....	....	....

1892	S	M	T	W	T	F	S
JAN.	...	.....	.....	.....	.....	1	2
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	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	.....	.....	.....	.....	.....	.....
FEB.	.....	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	.....	....	...	.....	....
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MARCH	.....	..	1	2	3	4	5
	6	7	8	9	10	11	12
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	20	21	22	23	24	25	26
	27	28	29	30	31	.....	.....
	....	....	....	....	...	...	....
APRIL	...	...	.....	.....	.....	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
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MAY	1	2	3	4	5	6	7
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	22	23	24	25	26	27	28
	29	30	31	.. ..	.....	...	.....
	....	....	....	....	....	....	....
JUNE	.....	.....	...	1	2	3	4
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	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
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JULY.	..	.....	.....	...	.....	1	2
	3	4	5	6	7	8	9
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	24	25	26	27	28	29	30
	31	...	.....	.....	...	...	.....

1892	S	M	T	W	T	F	S
AUGUST	.....	1	2	3	4	5	6
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	21	22	23	24	25	26	27
	28	29	30	31	.....	.....	.....
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SEPT.	....	....	....	....	1	2	3
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	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
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OCT.	...	...	....	....	1	2	3
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	.....	...	....
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NOV.	.....	...	1	2	3	4	5
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	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	.....	...	....
	....	....	....	....	....	....	....
DEC.	....	....	...	....	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
	....	....	..	....	....	....	....
1893.							
JAN.	1	2	3	4	5	6	7
	8	9	10	11	1	13	14
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	22	2	24	25	26	27	28
	29	30	3	.....	.....	.....	.....
	...	....	....	....	..	....	....
FEB.	....	....	....	1	2	3	4
	5	6	7	8	9	1	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	...	.....	.....	.....
	....	....	....	....	....	....	....

UNIVERSITY CALENDAR.

The University year consists of three terms beginning for the year 1891-2, respectively as follows: The Fall term, Wednesday, September 9th, 1891; Winter term, Wednesday January 6th, 1892; and the Spring term, Wednesday April 6th, 1892. The annual commencement is on the second Wednesday of June.

1890.

June 1st-8th—Final examinations.

June 6th—Saturday, 8 P. M., Regents' Prize Contest in Declamation.

June 7th—Sunday, 11 A. M., Baccalaureate Sermon by Rev. J. J. Murray, D. D., in University Hall.

June 9th—Tuesday, 8 P. M., Annual Contest between the Literary Societies.

June 10—Wednesday, 10 A. M., Commencement.

" " 1 P. M., Alumni Banquet.

Vacation till the second Wednesday in September.

September 8th—Entrance Examinations.

September 9th—Wednesday, 8:15 A. M., Fall Term begins.

November 26th—1 P. M., Thanksgiving recess begins.

November 30th—Monday, 8:15 A. M., Exercises resumed.

December 3d—Thursday, 7:30 P. M., Senior Orations.

December 16th—22d—Fall term examinations. Vacation of two weeks.

1892.

January 6th—Wednesday, 8:15 A. M. Winter Term begins.

February 22d—Monday, Washington's birthday—Holiday.

February 25th—Thursday, 7:30 P. M., Senior Orations.

March 23d—30th—Winter Term Examinations. Vacation one week.

April 6th—Wednesday, Spring Term begins.

May 30th—June 6th—Final examinations.

June 4th—Saturday, 8 P. M., Regent's Prize Contest in Declamation.

June 5th—Sunday, Baccalaureate Sermon.

June 8th—Commencement.

BOARD OF REGENTS.

Dist.	Name of Regent.	P. O. Address.	Term Expires.
1.	J. B. SOMMERVILLE	Wheeling	1891
2.	CLARENCE L. SMITH	Fairmont	1891
3.			
4.	PEREGRIN HAYS	Glenville	1892
5.	JOHN G. SCHILLING	Spencer	1893
6.	EDWARD A. BENNETT	Huntington	1893
7.	WIRT A. FRENCH	Princeton	1894
8.	M. J. KESTER	Union	1894
9.	JAS. F. BROWN	Charleston	1895
10.	THOMAS J. FARNSWORTH	Buckhannon	1895
11.	JOSEPH MORELAND	Morgantown	1895
12.	JOHN A. ROBINSON	Patterson's Creek	1896
13.	W. W. BROWN	Kabletown	1896

Officers of the Board.

JOHN A. ROBINSON, PRESIDENT,
JOHN I. HARVEY, TREASURER,
W. P. WILLEY, SECRETARY.

Executive Committee.

JOHN A. ROBINSON, CHAIRMAN,
PEREGRIN HAYS,
CLARENCE L. SMITH,
J. B. SOMMERVILLE,
T. J. FARSWORTH.

Superintendent of Grounds and Buildings.

JOHN A. MYERS.

FACULTY AND TEACHERS.

In the Order of Official Seniority.

E. M. TURNER, LL. D. PRESIDENT,
Professor of Rhetoric and English.

P. B. REYNOLDS, D. D., VICE PRESIDENT,
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A., LL. D.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, A. M., PH. D.,
Professor of Modern Languages and Literature.

I. C. WHITE, A. M., PH. D.,
Professor of Geology.

A. W. LORENTZ, A. M.,
Principal of Preparatory Department.

ST. GEORGE T. BROOKE, LL. D.,
Professor of Common and Statute Law.

W. P. WILLEY, A. M., SECRETARY,
Professor of Equity Jurisprudence and History.

A. R. WHITEHILL, PH. D.,
Professor of Agriculture, Chemistry and Physics.

JAMES W. HARTIGAN, A. M., M. D., D. S.,
Professor of Biology.

LIEUT. EDWARD S. AVIS, PH. D., 25TH INFANTRY, U. S. A.,
Professor of Mathematics and Military Science and Tactics.

THOMAS M. JACKSON, C. E., SC. D.,
Professor of Civil and Mining Engineering.

JOHN A. MYERS, PH. D.,
Director of the Experiment Station.

JAMES S. STEWART, M. S.,
Assistant Professor of Mathematics.

A. J. HARE, A. B.,
Assistant in Preparatory Greek and Latin.

B. C. ALDERSON, A. B.,
Assistant in Ancient Languages.

S. B. BROWN, A. M.,
Assistant in Geology.

H. N. OGDEN, A. M.
Assistant in English.

JOHN L. JOHNSTON, C. E.,
Instructor in Applied Mathematics and Drawing.

E. H. VICKERS, A. B.,
Assistant in Preparatory Mathematics and English.

MISS CLARA HOUGH.
Librarian.

AGRICULTURAL EXPERIMENT STATION.

Official Staff.

JOHN A. MYERS, PH. D.....Director.

C. F. MILLSPAUGH, M. D.....Botanist and Microscopist.

D. D. JOHNSON, A. M.....Agriculturist.

R. J. J. DE ROODE, PH. D.....Chemist.

A. D. HOPKISN.....Special Agent in Entomology.

SUSIE V. MAYERS.....Stenographer and Book-Keeper.

THE UNIVERSITY.

Origin.

The West Virginia University, as originally organized, was chartered by an act of the Legislature passed February 2, 1867, and was called "The West Virginia Agricultural College." The proceeds of the State's share of the "Public Land Scrip" donated by Congress to the several states under the act of July 2, 1862, providing for the establishment in each State of an Agricultural College, were given to the College, and constitute part of the endowment fund. By subsequent act of the Legislature the name of the institution was changed to "West Virginia University," and authority given to the Board of Regents to establish professional schools, and otherwise enlarge the scope of its work.

Location.

Morgantown, the seat of the University, is pleasantly situated on the right bank of the Monongahela river and is surrounded by a picturesque country. It is accessible by rail from Fairmont, on the main line of the Baltimore and Ohio Railroad, and by daily boat from Pittsburgh. It is expected that rail communication will be completed to Pittsburgh during the present year. Morgantown is a small place where there are few temptations to [illegible] and is in this respect an admirable [illegible] educational institution. Its climate is healthful, the air pure and bracing and free from malaria. The town is supplied with pure mountain water by a system of water works, and with natural gas for fuel and illumination from the Mt. Morris gas wells.

Grounds and Buildings.

The University grounds, comprising about eighteen acres, lie just beyond the borough limits to the north of the town, and command a beautiful view of the Monongahela river and the surrounding country. The present buildings consist of two large and commodious structures, three stories high, which contain the lecture and recitation rooms, library, museum, commencement hall, and the rooms of the two literary societies.

The Legislature at its last session made an appropriation of $3,000 for a building for a Mechanical department, and $15,000 to begin the construction of a building for the use of the scientific departments of the University. When these buildings are completed and supplied with apparatus, the University will have a first class "plant" for carrying on the work of instruction.

It is expected, during the present calendar year, to complete the new building for an armory, gymnasium and commencement hall,

the old armory building having been turned over to the Experiment Station, and enlarged, to be used as a laboratory for Station work.

Organization.

The organization of the University includes the usual courses of collegiate study, the Classical and the Scientific; a Military Department; a Law School, leading to the degree of Bachelor of Laws; a school of Civil and Mining Engineering, leading to the degree of Bachelor of Engineering; a Preparatory Department, and the State Agricultural Experiment Station.

Endowment Fund: Income.

The endowment fund now amounts to about $108,000. The interest on this fund and the annual appropriations made by the Legislature, constitute the income of the University. Tuition is practically free to all young men in the State over fifteen years of age, each county being entitled to one student under free tuition for every five hundred population in the county. This does not apply, however, to the Law School.

Additional Endowment.

By an act of Congress passed August 30th, 1890, there is appropriated for the year ending June 30th, 1890, to each State and Territory the sum of $15,000, for the further endowment of the Agricultural Colleges established under the act of Congress of July 2, 1862. The appropriation is an annual one, and increases $1,000 per year until it reaches a maximum of $25,000, after which the annual appropriation is to be $25,000. The University is the beneficiary of the act for this State. This act requires that each State shall, as a condition of receiving the benefits thereof, make provision for the instruction of colored youth in Agricultural and Mechanical sciences. The Legislature of this State at its recent session, established such an institution in the county of Kanawha, and appropriated $3,000 annually for the first five years, and $5,000 annually thereafter, from this fund, to assist in its maintenance. The remainder of each annual appropriation comes to the University. By the provisions of this act, the fund can be "applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction."

State Cadets.

There are appointed by the members of the Board of Regents, eight young men from each of the thirteen Senatorial districts of the State under regulations prescribed by the Legislature, who, besides receiving free tuition, are furnished their books and stationery. These young men mainly constitute the "Cadet Corps" and receive instruction in the Military Department of the University.

Other students are allowed to enter the Corps as volunteer cadets.

The Calendar.

The University year begins on the second Wednesday of September, and closes on the second Wednesday of June, when the annual commencement takes place. The work of the year is divided into three terms. The Fall term begins on the second Wednesday of September and ends as nearly as may be three days before Christmas. A vaca-

tion of two weeks follows. The Winter term then begins and continues twelve weeks, followed by a vacation of one week. The Spring term then begins and closes with the commencement exercises.

Requisites for Admission.

I. All candidates for admission to any department of the University must present satisfactory evidence of good moral character.

II. Students coming from other colleges must present certificates of honorable dismission from the same.

III. Applicants for admission to the Preparatory department must stand an approved examination in spelling, reading, writing, modern geography, elements of English grammar, arithmetic.

IV. Those wishing to enter the Academic Department must stand a satisfactory examination on the foregoing list of studies, and also such studies of the Preparatory Department as are related to the academic schools they desire to enter.

V. Students coming from the Normal School or any of its branches, or from approved High Schools, are admitted without examination, upon certificate, under regulations mentioned in a subsequent part of this catalogue under the "Preparatory Department."

VI. Candidates should procure from the President a written permit to be enrolled, and a copy of the printed laws of the University, also the Treasurer's receipt for tuition, etc., before presenting themselves to the Secretary of the Faculty for matriculation.

VII. All students are required to sign the following agreement as a condition of matriculation: "Being admitted as a member of the University, I promise and bind myself to obey the laws, rules and regulations of the same; to conduct myself with propriety; to be diligent in study; to be respectful to the Faculty, and deport myself as a gentleman in morality and courtesy among my fellow students, and in the community generally."

VIII. The first day of the Fall term is devoted to the enrollment and classification of the students present. A new roll is made for each term, and no one will be recognized as a student, or permitted to recite in any class, until his name is entered on the official roll kept by the Secretary of the Faculty. *This rule applies to all students.* If any one who is present at the beginning of any term for the purpose of entering as a student, shall delay matriculating beyond the time allowed for so doing, he will not thereafter be allowed to enroll, except by special permission of the Faculty, upon the presentation of a satisfactory explanation.

Admission of Female Students.

At the meeting of the Board of Regents in June, 1889, the Collegiate Department of the University was opened to female students. In order that those desiring to avail themselves of this action may be properly advised as to the conditions of admission, the Faculty have adopted the following order:

Any young woman who presents evidence of having completed, in other schools, the studies required in the Preparatory Department of the University or their equivalent, shall be allowed to enter the Colle-

giate classes upon passing the required examinations. If not presenting such testimonials and passing such examinations in all these studies, she shall be admitted to such college classes as she may be prepared to enter; *provided* there are at least two such classes occupying in the aggregate not less than ten recitation hours per week; and provided further, that she shall be *conditioned* to pass examinations in all preparatory studies (including Latin) of the *first* Preparatory year within one year from the date of entrance, and in those of the *second* Preparatory year within *two* years from the date of entrance. But if such applicant is a candidate for a degree, she shall, upon entrance, pass successfully the examination in a *majority* of the studies required for admission to the Collegiate Department.

Under these regulations the following collegiate classes are open to young women, who are not prepared to enter the collegiate classes in Latin, Greek or Mathematics, namely: History, Physics, Chemistry, Junior English, Anatomy, Zoology, and Field Botany.

But, in order to enter the class in History, the applicant must have sufficient age and general culture to pursue the study profitably. To enter the class in Physics or Chemistry, the applicant must have completed Arithmetic, including the metric system of weights and measures, and elementary Algebra; and in Physics, also three books of Geometry; provided, that if the applicant has not studied Geometry, she may enter the class in Physics by taking up the study of Geometry at the same time. To enter the class in Junior English, the applicant must have completed the English studies of the Preparatory Department or *their equivalent.*

Entrance Examinations.

All new students are expected to be present on the day preceding the opening of the Fall Term, beginning for this year September 8th, in order to be examined on the studies required for admission and on those required for admission to the particular schools they desire to enter. They should report at the President's room at the University not later than 9 o'clock A. M., on September 8th, and be by him directed to the examiners in the various branches.

Directions for New Students.

Students who have not before attended the Univerity should, on arriving, report to the President, who will assist them in procuring rooms, and give them directions as to the payment of fees, matriculation, enrollment and selection of their studies.

Matriculation and Tuition Fees.

All students, except appointed cadets, are required to pay a matriculation fee of $5.00 when entering the University. This applies to all departments.

Tuition is free to all students from this State over fifteen years of age, in the several departments of the University, except in the School of Law: *Provided*, That each county shall be entitled to one free student for every five hundred of its population, or fraction above half that number.

If a greater number of students than is allowed in the foregoing rate apply for admission, the first enrolled, up to the proportionate number, have free tuition, and all others are charged at the rate of $8 per term in the University Department, and $5 per term in the Preparatory Department.

Students from other States are charged $12.50 per term for tuition in the University Department, and $5 per term in the Preparatory Department.

Matriculation fee.....$5 00
Tuition in the Law Department (per term).....8 00
Contingent fee in all Departments (per term).....2 00

Students in Analytical Chemistry will be charged a fee of $20 per year to cover the use of material and wear and tear of apparatus in their hands.

All fees must be paid to the Treasurer, promptly on the first day of each term.

There will be no variations nor deductions from these rates for any cause whatever, except protracted illness.

Ministerial students are admitted free, upon proper testimonials.

Regulations Concerning Text Books issued to Cadets.

Under the laws governing the University, appointed cadets are furnished with the necessary text-books at the expense of the State.

At the end of each term all cadets must account to the commandant for the text-books so furnished them; and any cadet who shall abuse or fail to return any book with which he is charged, shall pay to the Treasurer the value thereof.

All books returned by cadets shall be kept in store by the book agent and re-issued so long as they may serve the purpose of text books.

Rooms and Boarding.

Students rent rooms in private houses in the town, there being no dormitories on the University grounds. Room rent ranges from 75 cents to $1.25 per week, everything furnished except lights and towels.

Board is furnished either by private families at a stated price per week, or more generally by the system of club boarding.

A number of students form a club, and employ some person to cook for them and furnish room and table ware. One of the club acts as caterer and buys the supplies, of which an account is kept and the actual cost is divided *pro rata* among the members. This is a very economical system and is the one usually adopted by the students. Boarding on this system has ranged during the present year from $1.75 to $2.00 per week. Board in private families costs $2.00 to $2.50 per week.

Washing costs from $1.00 to $1.50 per month.

Expenses.

The expenses of the student vary according to his habits. The *necessary* expenses of a student at the University are estimated according to the following table, excluding clothing and traveling expenses, for the University year of forty weeks.

Room rent	from $31 00 to	$ 52 00
Boarding	" 70 00 to	103 00
Washing	" 11 00 to	16 00
Lights and Incidentals	" 20 00 to	20 00
Text Books (average)	" 8 00 to	15 00
Total	$140 00	$206 00

To this add matriculation fee of $5 00 for the first year, the tuition fees of those students who are required to pay tuition, and contingent fee of $2 00 each term.

Parents and guardians are cautioned against providing a liberal supply of spending money for their sons or wards, as not conducive to studious habits, and as inducing not only waste of time, but also the formation of bad habits.

Discipline.

Discipline is directed to the development of manliness and self-respect among the students. They are expected to be gentlemanly in their conduct and correct in their habits, and to deport themselves in all places as reputable and honorable citizens. *No young man will be allowed to retain his connection with the University who persists in habits of dissipation or other disreputable conduct.*

The rules of the University require that every student shall be in his place at all stated exercises, from the opening to the close of his connection with the University. A record is kept, in which are entered the grade of scholarship of each student, and his absence from exercises.

A report is sent at the beginning of each year to parents and guardians, notifying them of the matriculation of their sons or wards. If the habits of study and general deportment of any student shall be found to be in violation of the established discipline, the parent or guardian will be promptly notified by the Secretary of the Faculty. The absence of any such report will be an assurance that his conduct and habits are commendable. Mere inattention to study will, if persisted in, insure dismissal from the University. No student is allowed to leave the precincts of the University during term time without special permission.

The attention of parents and guardians is specially called to the fact that all exercises begin promptly on the day stated in the calendar, and that it is essential to the best interests of the student and o. his class-mates that he be punctual in his place from the first day of the term to the last. No excuse will be accepted for absence unless such absence is unavoidable. It must be distinctly understood that students are allowed to enter only on condition that they comply with the rules of the University and apply themselves punctually and without interruption to their prescribed studies. College duties once assumed require a student's full time, and no extra work taken up by himself or imposed by others, and no absence for the mere pleasure of the student or his friends can be allowed to interfere with his studies.

Religious Worship.

The exercises of each day are opened with reading the Scriptures, singing and prayer, at which all students are required to be present. They are also required, unless for sufficient reason excused, to attend regularly some place of religious worship on the Sabbath, and on all occasions to treat the institutions of religion with respect.

At their meeting in 1885, the Board of Regents passed the following resolution on this subject.

"*Resolved*, That each student will be required to attend on Sabbath the public service of his choice, or, if he is a minor, as his parents or guardian may direct; but no student shall be required to attend any religious service contrary to his conscientious convictions, unless, in the case of a minor, his parent or guardian request it."

Regents' Prizes.

The Regents' Prize of $25.00 for Essay, is given to any member of the regular University schools, who shall write the best essay on a subject to be selected by the Faculty. The prize is awarded by a committee of citizens chosen by the Faculty, under the following regulations.

1. A student competing for the prize shall write on the subject furnished or prescribed as above, the manuscript to be in his own handwriting.

2. All essays shall have fictitious signatures, accompanied with a sealed letter containing both the real and fictitious names.

3. Essays shall not be less than fifteen nor more than twenty-five minutes in length.

4. The successful competitor shall read his essay in public on such evening as the Faculty may direct.

The Regents' Prize of $15.00 for Declamation, shall be presented to any student whose studies are entirely in the Preparatory Department, who shall, upon contest, deliver the best declamation; the prize to be awarded by a committee appointed by the President of the Board of Regents.

In the year 1869, these prizes were awarded as follows: Essay, Mr. C. C. Coffman; Declamation, Mr. M. E. Gorman.

Library and Reading Room.

About five thousand volumes have been carefully selected and placed on the shelves of the Library, including not only many choice and valuable books of reference, but also standard works of the various departments of History, Biography, Theology, Agriculture, Arts, Sciences and general literature.

The friends of education are respectfully requested to make contributions to its shelves.

A deposit of $2.00 is required of all students who wish to avail themselves of the privilege of the library. This is intended to secure the safe keeping and return of the books borrowed.

The Library has been removed to the large room formerly used as the Chapel, and is now open every day from 8½ A. M. to 12 M., and from 2 to 5 P. M. for the delivery of books and for consultation. Part of the room is used as a Reading Room, which is supplied with the leading magazines and periodicals of this country and Europe.

A large and valuable addition of books in the various departments of Science and Literature has been added to the Library during the year.

Books of reference are not allowed to be taken from the Library; so that they are accessible for consultation at all hours.

Arrangements are also made by which books on special subjects are temporarily withdrawn from circulation when required for the use of students in any special study, or for the preparation of essays required in connection with the regular class-work.

Museum.

The Museum contains extensive Mineralogical, Geological and Conchological cabinets, together with many specimens of other departments of Natural History. We request all who are interested in such matters to send suitable specimens for the Museum, especially Indian relics, shells, minerals, fossils and alcoholic specimens of animals. Such donations will be acknowledged and carefully labelled with the name of the donor. There are already over 2,000 specimens of minerals and fossils, and more than 2,500 of recent shells.

The Museum has recently been enriched by the purchase of Prof. Henry A. Ward's College collection of Rocks and Minerals, to which the students of Geology have constant access.

The vicinity of the University offers unrivaled advantages for the study of Practical Geology.

Literary Societies.

There are two of these, the Parthenon and Columbian, in connection with the University, supplied with suitable halls handsomely furnished, whose exercises in Composition, Reading, Oration, Debate

and Criticism, are, in many respects, of great advantage to the student. They also afford facilities for an acquaintance with parliamentary forms, and the acquisition of business habits. The authorities of the University will afford every facility for increasing the accommodation and usefulness of these valuable auxiliaries. A public contest between these Societies, in Essay, Oration and Debate, takes place annually during commencement week.

Collegiate Department.

COLLEGIATE DEPARTMENT.

Faculty.

E. M. TURNER, LL. D., PRESIDENT,
Professor of Rhetoric and English.

P. B. REYNOLDS, D. D.,
Professor of Metaphysics.

ROBERT C. BERKELEY, M. A., LL. D.,
Professor of Ancient Languages and Literature.

JOHN I. HARVEY, PH. D.
Professor of Modern Languages and Literature.

I. C. WHITE, PH. D.
Professor of Geology.

ST. GEO. T. BROOKE, LL. D.,
Professor of Inter. and Const. Law.

W. P. WILLEY, A. M.,
Professor of History.

A. R. WHITEHILL, PH. D.,
Professor of Agriculture, Chemistry and Physics.

JAMES W. HARTIGAN, A. M., M. D., D. S.
Professor of Biology.

1ST. LIEUT. EDWARD S. AVIS, PH. D., 25TH INFANTRY, U. S. A.,
Professor of Mathematics.

B. C. ALDERSON, A. B.,
Assistant in Ancient Languages.

S. B. BROWN, A. M.,
Assistant in Geology.

H. N. OGDEN, A. M.,
Assistant in English.

COURSES OF STUDY IN THE COLLEGIATE DEPARTMENT.

Two regular courses of study are offered in the Collegiate Department, leading to the degrees of Bachelor of Arts and Bachelor of Sciences.

The details of the requirements for these degrees, and of the courses of study for each of them, are given on subsequent pages.

Besides the regular courses for degrees, students who do not expect to stand for a degree are allowed under advice of the Faculty, to select such studies in the Collegiate Department for which they are prepared as may be preferred by them and are adapted to their life-work. All students are, however, advised to take a regular course as far as possible.

The course of study for the Bachelor's degrees is intended to cover four years. Students who undertake to complete the course in less time must necessarily burden themselves with work to such an extent that they have no time for reading or research outside of the regular class room work. The widened field of study and research in all departments of knowledge makes it impossible, in a college course covering the usual curriculum of study, to do more than give the main facts embraced in the great departments of Philosophy and Science, which must be supplemented by the independent study of the student. If his time is all taken up in preparing recitations, he has no time for specializing his work in any department which may be particularly attractive to him, or in the line of his subsequent work.

Requirements for Admission.

To enter the Collegiate Department, students must have completed the course required for admission, as stated in the course of study for the Preparatory Department, or its equivalent; *provided*, that students who have not completed all the preparatory studies will be required to take, first, the studies of the Preparatory Department in which they are deficient; and, in addition to these, they may take such studies in the Collegiate Department as they are prepared to take, under the advice of the Faculty.

The course of study in the Preparatory Department will be found in the latter part of this catalogue.

Selection of Studies.

Each student in the Collegiate Department is required to attend fifteen recitations per week, and to adhere, *throughout the year*, to the studies selected, unless the Faculty, for good cause shown, allow him to attend a less number, or make an exchange.

Students will be classed in the several subjects of study, according

to their attainments; but a professor may at any time transfer a student to a higher or lower class, when in his judgment necessary.

Distribution of Studies.

The subjects of study in the Collegiate Department are distributed into ten groups as follows:

Rhetoric, English, Metaphysics, Ancient Languages, Modern Languages, Geology, History, Mathematics, Agriculture, Chemistry and Physics and Biology.

Examinations.

Written examinations are held in each class at the close of each term, and at such other times as each Professor may deem necessary; *provided*, such special examinations shall not interfere with other classes.

The time allowed for examination shall not be less than two hours, and not more than five hours.

No student will be excused for non-attendance at examinations, except upon presentation of a reason which may be considered valid by the Faculty.

When a student has attended the examination in any class and has failed to pass, no second examination will be allowed such student except by permission of the Faculty.

Any student whose term marks for any term average 8.5 on a scale of 10 in any subject extending throughout the whole year, who is absent, for some unavoidable cause, from the regular examinations held at the close of such term, may be excused from passing such examination—*provided*, that the Faculty will first determine whether the cause for absence is sufficient; and provided further, that such exemption from examination will not be allowed for more than one term in any academic year.

Grading.

Recitations and examinations are graded on a scale of 10. In order to pass from a lower to a higher class in any subject, a student must attain an average standing of 7 on a scale of 10, for each term in that class during the year.

In ascertaining a student's standing in his classes, examination marks count one-half and recitation marks one-half.

All absences from recitations are counted against the student in estimating his standing in his classes, except absences on account of sickness or other unavoidable cause, which may be excused by the faculty.

Requirements for Degree of Bachelor of Arts.

The degree of Bachelor of Arts requires the completion of the following course of study with an average standing of 7 each term in each of the studies named in the respective years.

This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.

(NOTE.—The figures in parenthesis indicate the number of recitations per week. The hours for recitation are designated in the *Schedule of Recitations* at the end of this statement While students are not required to confine themselves strictly to the order of study as here laid down, in making their selections, they are advised to do so, in order to avoid conflicts in hours, as the schedule of recitations is arranged to suit this order, and changes will not be made to accommodate those who make a different selection.)

In order to enter this course of study, applicants must have completed the course of study in the Preparatory Department, or its equivalent, *except Book-keeping.*

Bachelor of Arts Course.

FIRST YEAR STUDIES.

Junior Latin (3); Junior Greek (3); Junior Mathematics (4) (Fall and Winter Terms); Junior English (3); Physics (3).

SECOND YEAR STUDIES.

Intermediate Latin (3); Intermediate Greek (3); History (2); Inorganic Chemistry (3). *Fall and Winter Terms.* Rhetoric (2); Botany (2).

THIRD YEAR STUDIES.

Fall and Winter Terms. Senior Latin (elective) (2); Senior Greek (elective) (2); Junior German (elective) (5); Junior Metaphysics (3); Senior English (2); Zoology (3); Geology (2).

Spring Term. Drop Zoology and take Political Economy (3).
Three literary performances during this year, under the Professor in English.

FOURTH YEAR STUDIES.

Required Studies. Metaphysics (3); Anatomy, Physiology and Hygiene (2). Two original public performances during the year, and one at commencement.
Elective Studies. (Student selects 10 hours from this list.) Senior German (3); Junior French (5); Anglo Saxon (2); Polit. Economy (2); Political Science (2); Inter. and Const. Law (2); History of Philosophy (2); Agriculture (2); Micro-copy (2); Practical Physics (2); Anatomy (3); Historical Psychology (2).
NOTE.—Students must present their elections to the Faculty during the first week after the opening of the Fall Term.
The various subjects and text books in the several studies enumerated in the above courses are set out in full, by years and terms, in the announcements of the Professors of the several schools on the next following pages.

Requirments for Degree of Bachelor of Sciences.

The degree of Bachelor of Sciences requires the completion of the following course of study, with an average standing of 7 each term in each of the studies named in the respective years.
This course of study is intended to occupy four years, and candidates for this degree are required to adhere to the course as here detailed.
In order to enter this course of study, applicants must have completed the course of study in the Preparatory Department, or its equivalent, *except Greek.*

FIRST YEAR STUDIES.

Junior Mathematics (4); Junior English (3); Junior French (5); Physics (3).

SECOND YEAR STUDIES.

Senior Mathematics (3); Senior French (3); Chemistry (3); Rhetoric (2); Field Botany (2); Applied Mathematics (elective) (2); History (elective) (2).

THIRD YEAR STUDIES.

Junior Metaphysics (3); Junior German (5); Zoology and Structural Botany (5); Geology and Minerology (2).

In the Spring Term, Political Economy (3), takes the place of Zoology (3).

Three literary performances during the

FOURTH YEAR STUDIES.

Required Studies. German (3); Metaphysics (3); Anat. Phys. and Hygeine (2). Two original public performances during the year, and one at commencement.

Elective Studies. Anglo-Saxon (2); Polit. Economy (2); Political Science (2); Inter. and Const. Law (2); History of Philosophy (2); Agriculture (2); Microscopy (2); Practical Physics (2); Anatomy (3); Historical Psychology (2). Ten hours elective work must be selected by the student from the above list.

NOTE.—Students must present their elections to the Faculty during the first week after the opening of the Fall Term.

The various subjects and text-books in the several studies enumerated in the above courses are set out in full, by years and terms, in the announcements of the Professors of the several schools on the next following pages.

Post-Graduate Courses.

MASTER OF ARTS.

The deree of Master of Arts will hereafter be given to Bachelors of Arts, who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

MASTER OF SCIENCES.

The degree of Master of Sciences will hereafter be given to Bachelors of Science who shall have pursued one year's post-graduate study at the University under the direct supervision of the Professors in charge of the various subjects of study. Those desiring to take this course will submit to the Faculty for approval a scheme of the particular line of work proposed.

A rigid examination will be held at the end of the course.

Degrees Conferred—June 10, 1890.

HONORARY DEGREES.

LL.D.—Prof. R. C. Berkeley, West Virginia University.
PH.D.—Prof. John I. Harvey, West Virginia University.
PH.D.—Prof. E. S. Avis, West Virginia University.

DEGREES IN COURSE, 1890.

Master of Arts: Wayland F. Reynolds.

Bachelor of Arts: Harvey Brand, Frank W. Clark, Laurence J. Corbly, Frank C. Reynolds, Enoch H. Vickers, Elmore E. Woodson.

Master of Sciences. Bert H. Hite.

Bachelor of Laws: Andrew S. Alexander, James E. Chipley, Frank H. Garrett, David L. Jamison, Robert L. Keadle, Tucker H. Ward.

ANNOUNCEMENTS

OF THE

COURSE OF INSTRUCTION

BY THE

PROFESSORS IN THE COLLEGIATE DEPARTMENT

Rhetoric and English.

THE PRESIDENT AND MR. OGDEN.

The instruction in English and Rhetoric runs through the entire collegiate course.

In the first year Mr. Ogden gives instruction during the fall term in the elementary principles of Rhetoric, giving special attention to the subjects of diction, the sentence, figurative language, and versification, with practical exercises in composition, using Genung's Practical Rhetoric as the text book.

During the winter term attention is directed to the history and development of the English language, use is made in Lounsbury's history and French's English Past and Present, which are used as texts.

During the spring term an introductory course in English literature is given, in the study of Shaw's Manual and Swinton's studies in English literature.

This course occupies three hours a week throughout the year, and is required of all candidates for bachelor's degrees.

In the second year of the course, the subject of Rhetoric is continued in the study of discourse, in its principles, laws, processes and forms, with reference to its logical basis, and its application to literature. Analyses of themes and essays are required throughout the year. This course is conducted by the President and is required of all undergraduates. Text: Genung's Rhetoric. Two hours a week throughout the year.

In the third year Mr. Ogden conducts a series of critical studies of selected authors and periods of English literature. Besides the regular text work each student is required, each term, to read for discussion before the class, a critical paper on the life and writings of some designated author. In this way it is sought to apply the principles of literary criticism taught in the class room.

The principal authors studied during the current year were, Addison, DeQuincey, Macaulay, Carlyle and Irving among prose writers, and in poetry, Chaucer, Shakespeare, Milton and Longfellow.

The course occupies two hours a week through the year and is required of candidates for A. B. To others it is optional.

Texts, Minto's Prose Literature and Poets, Garnett's Prose Selections, English Classics Texts.

In the fourth year, an elective course in Anglo-Saxon is conducted by Mr. Ogden. The grammar is first carefully studied, and the class then proceeds to the reading of Anglo-Saxon literature. The relations of Anglo-Saxon to English are made a constituent part of the course.

Two hours a week throughout the year.

Texts: Sweets' Primer and Reader, Selections from Library of Anglo-Saxon Poetry (Ginn & Co.).

The courses in English and Rhetoric are intended to be taken in the order given above, and students must complete the preceding work in order to enter the higher classes.

THE ENGLISH SOCIETY—Composed of students in the English course and others for the prosecution of special studies on subjects requiring research has been organized by Mr. Ogden during the current year. It is proposed to continue it during the next year. Its meetings will be held bi-weekly on Monday evening. The original papers, reports and answers to queries, read before the society are written on paper of uniform size and bound into a volume at the close of each college term. Prizes for meritorious work are offered for competition.

Political Economy.

THE PRESIDENT.

Political Economy has heretofore been part of the regular English course. It is now made distinct. During the Spring term of the third year of the collegiate course three hours a week are given to an elementary course in the Principles of Political Economy. This course is designed to open up the subject to the student by a general survey of the field and the exposition of the leading divisions with such incidental discussions of economic problems as is adapted to stimulate interest in the subject. Text: Chapin.

In the fourth year an elective course is offered, occupying two hours a week during the year, for such students as desire to go further into the subject. In this course the principles of the science are applied to practical economic problems, and the limitations of theoretical views are made prominent. The student is encourged to investigate for himself and form his own conclusions. Current economic problems, as labor strikes, the currency, the silver question, the tariff, trusts, &c., are discussed by the class. Text: Walker.

SCHOOL OF METAPHYSICS.

PROF. REYNOLDS.

The subjects studied in this school are arranged as follows:

1. *Junior, for Elementary Course*—This course will take three hours per week through the year, and includes the elements of Psychology, Deductive Logic and Ethics. Text books: Hill's Elements of Psychology, Jevons-Hill's Elements of Logic, Robinson's Principles and Practice of Morality, and lectures by the Professor.

2. *Senior, or Advanced Course*—This course will require three hours per week through the year, and includes Metaphysics, Inductive Logic and Principles of Science or applied Logic. Text books: McCosh's First and Fundamental Truths, Jevons' Principles of Science with references to Fowler, DeMorgan, Mill and Hamilton.

3. *Elective Course in Mental Evolution*—Two hours a week through the year will be given to this course. It includes studies in Physiological Psychology, or the development, structure and functions of the

brain and nervous system; in Comparative Psychology, or the law, growth, gradations and comparison of the mental faculties in animals and man; in Historical Psychology, or mental development as exhibited in the growth of language, arts and institutions. The instruction will be mainly by lectures, with references to the works of Ladd, Luys, Carpenter, Romanes, Bascom and Tylor.

4. *Elective Course in the Science of Religion.*—This course will take two hours a week through the year, and includes the discussion of the following subjects:

Theism—the evidence in nature of the existence and attributes of God; Religion—Natural, Comparative and Christian, and its relation to ethics, society and civilization; Natural Ethics—the scientific basis of morals. Text books: Purinton's Christian Theism, the Professor's Lectures, with references to the works of Fisher, Harris, Clark, Max Muller, Bruce, Drummond and Spencer.

5. *Elective Course in the History of Philosophy.*—From two to three hours a week through the year will be given to this course:

The exercises will consist of the examination and discussion of the leading schools of thought of ancient, medieval and modern times, as presented in the best works on these subjects. The class meetings will be arranged to suit the convenience of students taking the course. Only graduates of the School of Metaphysics and those taking the senior course are eligible.

Ancient Languages.

PROF. BERKELEY: MR. ALDERSON.

The subjects taught in this school are:

1. The Latan Language and Literature, in which there are three classes, viz; *Junior*, *Intermediate* and *Senior*.

Text books used:

1. JUNIOR CLASS: MR. ALDERSON.

Fall Term.—Virgil's Bucolics and Georgics.
Winter Term.—Horace's Odes and Epodes.
Spring Term.—Cicero de Senectute and de Amicitia.

2. INTERMEDIATE CLASS: PROF. BERKELEY.

Fall Term.—Livy; Wilkins' Roman Literature.
Winter Term.—Horace's Satires and Epistles.
Spring Term.—Cicero de Officiis.

3. SENIOR CLASS: PROF. BERKELEY.

Fall Term.—The Agricola and Annals of Tacitus.
Winter Term.—The Annals of Tacitus (continued).
Spring Term.—Juvenal.

In each class special attention is paid to the translation of English into Latin, and to the grammar and etymological structure of the language. A private course of parallel reading will also be prescribed whenever practicable.

Lexicons recommended for each Class—Harper's or White's.

II. The Greek Language and Literature, in which there are also three classes, viz: *Junior*, *Intermediate and Senior*.

Text books used:

1. JUNIOR CLASS: MR. ALDERSON.

Fall Term.—Herodotus.
Winter Term.—Homer's Iliad.
Spring Term.—Homer's Odyssey.

2. INTERMEDIATE CLASS: PROF. BERKELEY.

Fall Term.—Xenophon's Memorabilia; Jebb's Greek Literature.
Winter Term.—Plato's Apology and Crito.
Spring Term.—Euripides.

3. SENIOR CLASS: PROF. BERKELEY.

Fall Term.—Demosthenes.
Winter Term.—Sophocles.
Spring Term.—Thucydides.

As mentioned above, in the case of the Latin language, special attention is paid to the translation of English into Greek, to the grammar and structure of the language, and to private courses of parallel reading.

Lexicon Recommended for each Class—Liddell's and Scott's—the abridged edition for the Junior—the unabridged for the Intermediate and Senior.

For Reference—Veitch's Greek Verbs.

Students are required to pronounce Latin according to the so-called Roman method.

The Junior and Intermediate classes recite three times a week, and the Senior twice a week.

Modern Languages.

PROF. HARVEY.

In this School are taught French and German. In each Language there are two classes, Junior and Senior. The Junior Classes are thoroughly drilled in the Etymological forms, and are practiced in the simpler forms of Syntax. Frequent exercises are required of all classes. Besides the regular class room work, an *extra* private course in reading will be prescribed and required in the Senior classes. Junior classes meet five times a week. Senior classes meet two or three times a week.

For admission to this school, students *must have completed* the course of study in English and Latin of the Preparatory Department, or their equivalent.

Text Books:

JUNIOR FRENCH.

Fall Term.—Whitney's or Edgren's Grammar, Super's Reader.
Winter Term.—Grammar continued, Reader continued.
Spring Term.—Grammar continued, Colomba, Picciola, or selections from modern authors.

SENIOR FRENCH.

Fall Term.—Sand's La Petite Fadette, or other selections; Grammar and exercises.
Winter Term.—Corneille's Le Cid, Racine's L'Athalie, Moliere's L'Avare begun; Grammar and Exercises.
Spring Term.—L'Avare finished; Hugo's Ruy Blas or Hernani, or other selections; Saintbury's French Literature.

JUNIOR GERMAN.

Fall Term.—Joynes-Meissner's or Van der Smissen-Fraser's Grammar and Joynes' Reader.

Winter Term.—Grammar continued, Reader continued.

Spring Term.—Grammar continued. Schiller's Jungfrau von Orleans, or Wilhelm Tell.

SENIOR GERMAN.

Fall Term.—Lessing's Minna von Barnhelm, Uhland's Herzog Ernst; Grammar and Exercises.

Winter Term.—Goethe's Hermann and Dorothea; Freitag's Journalisten; Grammar and Exercises.

Spring Term.—Goethe's Iphigenie, Fouque's Undine, or other selections; Taylor's German Literature.

GEOLOGY AND MINERALOGY.

PROF. WHITE; MR. BROWN.

By a recent order of the Board of Regents, the course in Geology is now extended over two terms instead of one as formerly, and one term in Mineralogy and one in Physical Geography are added.

A special course in Stratigraphical Geology is also given to Engineering students who have taken Dynamical Geology in the Fall Term.

The regular class in Geology will meet Tuesday and Thursday during the Fall and Winter Terms. The special class in Stratigraphical Geology on Mondays and Fridays during the Winter and Spring Terms—Mr. Brown.

The class in Physical Geography will meet on Monday and Wednesday, and the class in Mineralogy will meet on Tuesday and Thursday during the Spring Term: Mr. Brown.

Mineralogy is required of those applying for the degree of B. E. or B. S.

To enter the course in Geology, proficiency in Chemistry, Botany, and Zoology is required of all except candidates for the degree of B. E. of whom only Chemistry is required.

In addition to this regular require l work for the Academic degrees, an advanced course in Practical Geology will be given by Prof. White to any students who desire to become specialists. This course will include original research in the construction of sections, tracing of strata, and the making of Geological maps of particular districts, as well as reports on the fossils, minerals and other features of the geologic terranes. There will be no stated meetings of the classes in this course, but the members will report their work to Prof. White for criticism and correction, as well as guidance.

EXCURSIONS.

Local excursions, on Saturdays especially, will be made by the regular classes during the Fall and Spring Terms, and during the Spring Term of each year, usually about the middle of May, a Geological excursion will be taken through West Virginia and adjoining States, for the purpose of training the student in the work of Practical Geology. No State in the Union has so many advantages to give the student in this particular line. The site of the University itself, located as it is in the heart of the Appalachian Coal Field and close to a great oil and gas region, presents unrivaled facilities for the study of all problems connected with this useful science, and especial attention is given to every phase of Economic and Practical Geology, during term work as well as during the excursion. This excursion will be required of all students who graduate in the Scientific

Department of the University, but it is open to all who take the study. The necessary expenses of the excursion never exceed $25, unless the members of the class desire to go further, or traverse more ground than is customary.

Text books:

Geology, Leconte's Elements. For reference: Dana's Manual, Lyell's Principles, and Geike's Text Book.

History and Political Science.

PROF. WILLEY.

The course of instruction in this school is directed to two main purposes: 1. To give the student a fair outline view of the rise and progress of the nations of the world and enable him to form a correct basis on which to build in subsequent reading and investigation. 2. To group together the chief epochs and events of history in such a manner as will assist him to travel easily from cause to effect, and thus to discover not only the facts, but also the philosophy of history.

The method of instruction is by text-books, collateral readings and lectures.

The course of study extends through three terms, the class reciting three hours per week. The Fall term is given to the division embracing Ancient history, and the Winter and Spring terms to Mediæval and Modern history, including United States history.

The text-books are Myer's Ancient, Mediæval and Modern histories; with *reference* to Ridpath's Encyclopædia of Universal History, Green's Short History of the English People, Michelet's French Revolution, Freeman's Historical Essays, (first and third series), Arnold's Lectures on Modern History, Ridpath's History of the United States, Bancroft's History of the United States, Curtis' History of the Constitution, Stille's Studies in History, and Schlegel's Philosophy of History.

A course of lectures is given during the second and third terms on "Civics," tracing the history of governments from primitive times through successive stages of development down to the present day, and explaining in detail the governmental machinery of modern towns, counties, states and nations.

Political Science.

An elective course in Political Science is given in this department when a sufficient number of students offer to form a class. The course will be supplemental to the series of lectures on Civics delivered to the class in History, and is open only to those who have taken the course in History.

Agriculture, Chemistry and Physics.

PROF. WHITEHILL.

Instruction in the several departments of this school is by text-books, lectures and experiments. The courses in General and Practical Physics and General and Analytical Chemistry are continued throughout the year; the course in Agriculture is completed at the end of the Winter term.

In *Agriculture*, the attention of the class is directed to the following subjects: The organic and inorganic food of plants, their germination, development and accompanying physical changes; the chemistry and physics of soils, their origin, formation, classification, exhaustion and relation to vegetable nutrition; drainage, irrigation, sub-soiling, manures, grain and forage crops, the care and management of stock, etc.

The new edition of Emerson and Flint's Manual of Agriculture is used as the text-book, and the subject matter is illustrated as far as possible, by experiments in the laboratory.

In *Physics*, as a preparation for after study, the leading principles of Mechanics are studied during the Fall term. During the Winter term, Electricity, Magnetism and Sound are taken up in the order named, and these are followed by Heat and Light during the Spring term. Problems and experiments are introduced largely throughout the course, and the modern doctrines of Molecular Physics are fully explained. Students may enter the class at the beginning of any term, but the entire course requires one year for its completion.

The revised edition of Peck's Ganot is used as the text-book, and the text is supplemented by numerous problems and experiments drawn from other sources. The works of Arnott, Deschanel and other well known authors are in the laboratory, as books of reference.

In *Practical Physics*, the course is intended to aid the student in acquiring skill in the use of Physical apparatus, and is open to those who have taken the course of General Physics in the University, or who can stand an examination on the matter contained in the text books of the grade of Avrey's Natural Philosophy or Gage's Elements of Physics. So far as the apparatus permits practical work in dynamics, sound, heat and light is undertaken, and the elements of electrical engineering receive attention.

In *Chemistry*, the subjects presented are the distinctive features of the study, the laws of chemical combination, the source, preparation, properties and relations of chemical elements and compounds, and the doctrines of chemical philosophy. Throughout the course, allusion is made to the applications of Chemistry in medicine, pharmacy and the arts, and chemical problems are from time to time proposed for solution to fix in mind the principles, and to suggest the general methods of turning chemical knowledge to practical account. Inorganic Chemistry and Chemical Philosophy are studied during the Fall and Winter terms, and Organic Chemistry during the Spring term.

In *Analytical Chemistry* facilities are provided for systematic instruction in qualitative analysis, and for general practice in experimental work. Members of the class are supplied with the necessary apparatus and chemicals, and are required to spend from one to two hours daily in the laboratory. The course includes the preparation of some of the more important gases and salts, and the re-agents in common use. The tests for the different groups of metals and acids are then made in turn, and unknown salts and solutions are from time to time given to test the progress of the student in his work. During the Spring term especial attention is directed to some of the more important medical preparations and to the analysis of waters; and an elementary course in quantitative work is added.

Students who have completed the course in General Chemistry in the University are admitted to this class without examination. All other applicants are required to pass an examination on the matter contained in an elementary work on the subject named.

Students in the several classes of this department have access to a large and valuable collection of Chemical and Physical apparatus, and the various recitations and lectures are fully illustrated by tests and experiments. The following are some of the more important pieces of apparatus which are found in the laboratory: Brush Dynamo, 3 Troemer balances, Jolly balance, 2 Ruhmkorff coils, Holtz and plate electrical machines with accessories, Leyden and galvanic batteries, Geissler tubes, microscope, spectroscope, polariscope, heliostat, colorimeter, 2 air pumps with accessories, sonometer, convex and concave mirrors, radiometer, meteorological instruments, apparatus for electroplating and gas analysis, telephone, telegraphic instruments, combustion furnaces, photographer's outfit, models, pulleys, pendulums, etc.

School of Biology.

PROF. HARTIGAN.

The course of study in this school requires two years. In the first year, Zoology and Structural Botany are studied; and in the second Human Anatomy, Physiology and Hygiene.

FIRST YEAR—ZOOLOGY AND STRUCTURAL BOTANY.

Fall and Winter Terms—Zoology is studied during these terms. In the Fall term, Comparative Zoology is considered, while the Winter term is devoted to the study of Systematic Zoology and Histology. Each student in this branch is required to skelotonize five vertebrate animals; and all students except candidates for the degree of Bachelor of Arts, are required to prepare, cut, stain and mount for microscopical examination, a certain number of specimens of the various animal tissues.

Text-books in Zoology: Orton, Packard, Claus; and the works of Darwin, Haeckel and Spencer for reference. In Histology, Klien, Stricker, Shafer, Cornie and Ranvier.

Structural Botany is also studied during the Fall and Winter terms, the class reciting twice a week. The General Anatomy and Physiology of plants will first be studied, and then the special Anatomy and Physiology of plant tissue, together with the microscopical examination of these, and practical work in Bacteriology.

Text-books and books of reference: Bessey's Structural Botany; Gray, Sachs, Bently, Cooke, Crookshank's Bacteriology, Dawson's Geological History of Plants.

SECOND YEAR—ANATOMY, PHYSIOLOGY AND HYGEINE.

Fall and Winter Terms.—Five lectures are given weekly on General, Descriptive and Surgical Anatomy during the Fall and Winter terms. While each lecture on this branch of Anatomy will be fully illustrated by models, charts, specimens, manikins and every other means tending to impress the facts upon the student's mind, the skeleton or cadever will furnish the proper text for every lecture.

Practical Anatomy.—As a thorough knowledge of Anatomy can only be obtained by dissecting, every student in this branch of Anatomy is required to dissect at least one part of a subject one term. This constitutes a full course of dissection, and will be certified to by the demonstrator in charge, after the student has passed a satisfactory examination on the parts dissected. The dissecting room of the University is large, thoroughly equipped, well ventilated and lighted and is heated by steam, so that any desired temperature can be maintained, thus preventing the freezing and thawing of subjects during the colder months, which is so detrimental to their usefulness.

This room will be opened four nights in the week, from 7 till 10 o'clock during the Fall term, and from 6 till 9 o'clock during the Winter term. A demonstrator will be present each night. Material for dissection is furnished free.

NOTE.—Candidates for Bachelor's degrees are required to take the course in General Anatomy only. Those intending to study medicine, take also the course in Practical Anatomy.

Text-books, &c.: Gray, Wilson, Quain, Allen's Dissector, Holdens' Manual.

Spring Term.—Physiology is studied during the Spring term, including five lectures every week. The consideration of the Physiology of each organ will be preceded by lectures on its minute anatomy. The study of this branch will be facilitated by diagrams and charts and the use of the microscope, and by experiments upon inferior animals. Instruction in the Practical Analysis of Urine, and in the uni-

croscopical examination of urinary deposits and the different fluids of the body will be given in the course. Hygiene will be considered in connection with Physiology.

Text-books and books of reference: Flint's Human Physiology, Yoe's Manual, Kirk, Dalton, Carpenter, Foster.

In Hygiene, Parke's, Huxley and Youman, Wilson.

Mathematics.

E. S. AVIS, 1ST LIEUT., 25th U. S. INFANTRY.

The course of instruction consists of two years.

JUNIOR YEAR.

First term.—Trigonometry.
Second and third terms.—Analytic Geometry.

SENIOR YEAR.

First and second terms.—The Calculus
Third term.—The Calculus or Determinants.

Students are required to pass an examination in University Algebra and Geometry, in order to enter the Junior year in this school.

They should be well grounded in Logarithms, in Factoring, in the Discussion of Equations, and in the Eight Roots of the Four Forms of the Quadratic Equation, $x^2 \pm 2px = \pm q$.

Bachelor of Arts Course. Weekly Schedule. First Year.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY
FALL.	8½ 9½ 10½ 11½	*Physics:* Mechanics *Greek,* Herodotus, Gr. Prose Comp. *Math.* Trigonometry.	*Greek.* Herodotus; Gr. Comp *Math.* Trigonometry. *Rhetoric.* Style, Essays.	*Physics.* Mechanics. *Greek.* Herodotus; Gr Comp. *Math* Trigonometry.	*Latin.* Virgil; Comp. *Math* Trigonometry. *Rhetoric* Style Essays.	*Physics* Mechanics. *Latin.* Virgil; Comp. *Rhetoric.* Style, Essays.
WINTER.	8½ 9½ 10½ 11½	*Physics.* Electricity, Magnetism Sound. *Greek:* The Iliad; Exercises. *Math.* Analyt. Geom.	*Greek* The Iliad; Exercises. *Math.* Analyt. Geom. *English Language.*	*Physics* Electricity, Magnetism Sound. *Greek* The Iliad; Exercise; or *Latin.* Horace. Odes, Exercises *Math.* Analyt. Geom.	*Latin.* Horace, Odes; Exercises. *Math.* Analyt Geom. *English Language*	*Physics.* Electricity, Magnetism, Sound. *Latin.* Horace, Odes, Exercises. *English Language*
SPRING.	8½ 9½ 10½ 11½	*Physics.* Heat, Light. *Greek* The Odyssey; Exercises. *Math* Analyt. Geom.	*Greek.* The Odyssey; Exercise. *Math* Analyt. Geom. *English Literature*	*Physics.* Heat, Light. *Latin.* Cicero de Senectute, &c.; Exercises *Math* Analyt. Geom.	*Latin.* Cicero de Senectut, &c.; Exercises *Math.* Analyt. Geom. *English Literature.*	*Physics.* Heat, Light. *Latin.* Cicero de Senectute, &c.; Exercises *English Literature.*

Second Year.

FALL.	8½ 9½ 10½ 11½	*Greek.* Xenephon's Mem. Exercises. *History.* Ancient. *Chemistry.* Inorganic.	*Greek.* Xenophon's Mem &c. *Rhetoric* Invention; Essays. *Chemistry.* Inorganic.	*Latin.* Livy; Rom. Lit. *Greek.* Xenophons; Ex. *Chemistry.* Inorganic.	*Latin.* Livy; Rom. Lit *Rhetoric.* Invention; Essays. *Field Botany.*	*Latin.* Livy; Rom. Lit. *History.* Ancient. *Field Botany.*
WINTER.	8½ 9½ 10½ 11½	*Greek.* Plato's Apology; Exercises. *History.* Modern. *Chemistry.* Inorganic.	*Greek.* Plato's Apology; Exercises. *Rhetoric.* Invention; Essays. *Chemistry* Inorganic.	*Latin.* Horace; Satires. *Greek.* Plato's Apology. *Chemistry* Inorganic.	*Latin.* Horace; Satires. *Rhetoric* Invention; Essays. *Field Botany*	*Latin* Horace; Satires. *History.* Modern. *Field Botany.*
SPRING.	8½ 9½ 10½ 11½	*Greek.* Euripides: Exercises. *History.* United States.	*Greek.* Euripides. *Rhetoric.* Invention; Essays.	*Latin* Cicero de Officiis. *Greek,* Euripides.	*Latin.* Cicero de Officiis. *Rhetoric.* Invention; Essays. *Field Botany.*	*Latin* Cicero de Officiis. *History.* United States. *Field Botany.*

Bachelor of Arts Course. Weekly Schedule. Third Year.

TERM.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL	8½	*Psychology & Logic.*	*Geology.* Dynam. & Hist.	*Psychology & Logic.*	*Geology.* Dynam & Hist.	*Psychology & Logic.*
	9½	*Zoology.*		*Zoology.*		*Zoology.*
AND	10½		*Eng Lit* Special selections.		*Eng Lit.* Selections.	
WINTER	11½	**Latin*: Jacitus; or **German*: Grammar and Reader.	**Latin*. Tacitus; or **German* Grammar and Reader.	*German* Grammar and Reader	**Greek*. Demos. & Soph. **German*. Grammar and Reader.	**Greek* Demos.&Soph.;or *German*. Grammar and Reader
	8½	*Ethics.*		*Ethics.*		*Ethics.*
	9½	*Polit. Economy*: Elements		*Polit. Economy*: Elements		*Polit. Economy*: Elements
SPRING.	10½		*Eng Lit.* Selections.		*Eng. Lit.* Selections.	
	11½	*Latin*. Juvenal; or *German*. Grammar and Reader.	**Latin* Juvenal; or **German*. Grammar and Reader.	**German*. Grammar and Reader	**Greek* Thucydides; or **German* Grammar and Reader	**Greek* Thucydides, or *German*. Grammar and Reader

*These subjects are elective. The student may select German or French instead of Latin and Greek.

Fourth Year.

FALL,	8½	*German* Selections.	{ *Polit. Economy*. Adv'c'd *Agriculture*; F. & W.) { *Historical Psychology*.	*German*. Selections	{ *Polit. Economy* Adv'ed. *Agriculture*. (F. & W.) { *Historical Psychology*.	*German*. Selections.
WINTER,	9½	*French* Gram & Reader	{ *French*. Gram. & Read'r { *Political Science*	*French*. Gram. & Reader	{ *French* Gram. & Read'r { *Political Science*	*French* Gram. & Reader
AND	10½	{ *Anatomy, human.* { *Inter. & Const. Law.*	ANAT. PHYS & HYGIENE { *Science of Religion.*	{ *Anatomy, human.* { *Inter. & Const. Law.*	*NAT. PHYS. & HYGIENE { *Science of Religion.*	*Anatomy, human.*
SPRING	11½	METAPHYSICS.	{ *Physical Geography.* *Practical Physics.*	METAPHYSICS.	{ *Physical Geography.* *Practical Physics.*	METAPHYSICS
	3		*Mineralogy*	*Anglo Saxon.*	*Mineralogy.*	*Anglo Saxon.*

NOTE.—In the fourth year schedule required studies are printed in SMALL CAPS. From the other subjects printed in *italics*, the student is required to select 10 hours' of elective work per week, throughout the year.

Bachelor of Science Course. Weekly Schedule. First Year.

TERMS.	HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL.	8½ 9½ 10½ 11½	*Physics* Mechanics. *French* Gram. & Reader. *Mathematics*: Trigonom.	*French*: Gram & Reader. *Mathematics:* Trigonom. *Rhetoric:* Style, Essays.	*Physics:* Mechanics. *French:* Gram & Reader. *Mathematics:* Trigonom.	*French:* Gram & Reader. *Mathematics:* Trigonom. *Rhetoric:* Style, Essays	*Physics:* Mechanics. *French:* Gram. & Reader. *Rhetoric:* Style, Essays.
WINTER.	8½ 9½ 10½	*Physics:* Electricity, Magnetism, Sound. *French:* Gram. & Reader. *Mathematics:* Analytical Geometry.	*French:* Gram. & Reader. *Mathematics:* Analytical Geom. *English Language.*	*Physics:* Electricity, Magnetism. Sound. *French:* Gram & Reader *Mathematics:* Analytical Geom.	*French:* Gram. & Reader. *Mathematics:* Analytical Geom. *English Language.*	*Physics:* Electricity, Magnetism, Sound. *French:* Gram. & Reader. *English Language.*
SPRING.	8½ 9½ 10¼	*Physics:* Heat, Light. *French:* Gram & Reader *Mathematics:* Analytical Geom.	*French:* Gram. & Reader. *Mathematics:* Analytical Geom. *English Literature.*	*Physics:* Heat, Light. *French:* Gram. & Reader. *Mathematics:* Analytical Geom.	*French:* Gram & Reader. *Mathematics:* Analytical Geom. *English Literature.*	*Physics:* Heat, Light. *French:* Gram. & Reader. *English Literature*

Second Year.

FALL.	8½ 9½ 10½ 11½	*Mathematics:* Calculus. *History:* Ancient. *Chemtstry:* Inorganic.	*Rhetoric:* Invention, Essays. *French:* Selections. *Chemistry:* Inorganic.	*Mathematics:* Calculus. *French:* Selections. *Chemistry:* Inorganic.	*Rhetoric:* Invention, Essays. *French:* Selections. *Field Botany.*	*Mathematics:* Calculus. *History:* Ancient. *Field Botany.*
WINTER.	8½ 9½ 10½ 11½	*Mathematics:* Calculus. *History:* Modern. *Chemistry:* Inorganic.	*Rhetoric:* Invention, Essays. *French:* Selections. *Chemistry:* Inorganic.	*Mathematics:* Calculus. *French:* Selections. *Chemistry:* Inorganic.	*Rhetoric:* Invention, Essays. *French:* Selections. *Field Botany.*	*Mathematics:* Calculus. *History:* Modern. *Field Botany.*
SPRING.	8½ 9½ 10½ 11½	*Mathematics:* Calculus *History:* United States. *Chemistry:* Organic.	*Rhetoric:* Invention, Essays, *French:* Selections. *Chemistry:* Organic.	*Mathematics:* Calculus. *French:* Selections. *Chemistry:* Organic.	*Rhetoric:* Invention, Essays *French:* Selections. *Field Botany*	*Mathematics:* Calculus. *History:* United States. *Field Botany.*

Bachelor of Science Course. Weekly Schedule. Third Year.

TERMS.	HOUR	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FALL	8½	*Psychology and Logic.*	*Geology:* Dynam. & His.	*Psychology and Logic.*	*Geology:* Dynam. & His.	*Psychology and Logic.*
AND	9½	*Zoology.*	*Structural Botany.*	*Zoology.*	*Structural Botany.*	*Zoology.*
WINTER.	11½	*German:* Gram. & Read.	*German:* Gram & Read.	*German:* Gram. & Read.	*German:* Gram. & Read	*German:* Gram. & Read.
	8½	*Ethics.*	*Mineralogy.*	*Ethics.*	*Mineralogy.*	*Ethics.*
SPRING	9½	*Polit. Economy:* Elem'ts.		*Polit. Economy:* Elem'ts.		*Polit. Economy:* Elem'ts.
	11½	*German:* Gram. & Read	*German:* Gram. & Read.	*German:* Gram. & Read	*German:* Gram. & Read.	*German:* Gram. & Read.

Fourth Year.

	8½	*German:* Selections.	Political Economy: Advanced Agriculture. Historical Psychology	*German.* Selections.	Political Economy: Advanced Agriculture, Historical Psychology	*German:* Selections
FALL,						
WINTER	9½	Analytical Chemistry.	Analytical Chemistry Political Science.	Analytical Chemistry	Analytical Chemistry Political Science	Analytical Chemistry.
AND	10½	Anatomy, Human. Inter. and Const. Law.	*Anatomy, Physiology and Hygiene.*	Anatomy, Human. Inter. and Const. Law	*Anatomy, Physiology and Hygiene.*	Anatomy, Human. Inter. and Const. Law
SPRING.	11½	*Metaphysics.*	Science of Religion. Physical Geography. (S.)	*Metaphysics*	Science of Religion Physical Geography. (S.)	*Metaphysics.*
	3		Practical Physics Microscopy.	Anglo-Saxon	Practical Physics. Microscopy.	Anglo-Saxon.

NOTE.—In the Fourth Year Schedule, required studies are printed in *ITALICS*. From the other subjects, printed in Roman, the Student is required to select seven hours of elective work throughout the Year.

DEPARTMENT OF CIVIL ENGINEERING.

Faculty.

E. M. TURNER, LL. D., PRESIDENT,
Professor of Rhetoric.

P. B. REYNOLDS, D. D.,
Professor of Psychology and Logic.

JOHN I. HARVEY, PH. D.,
Professor of French.

I. C. WHITE, PH. D.,
Professor of Geology.

A. R. WHITEHILL, PH. D.,
Professor of Chemistry and Physics.

E. S. AVIS, PH. D.,
Professor of Mathematics.

T. M. JACKSON, C. E.,
Professor of Civil Engineering.

JOHN L. JOHNSTON, C. E.,
Assistant in Engineering.

S. B. BROWN, A. M.,
Assistant in Geology.

H. N. OGDEN, A. M.,
Assistant in English.

Course of Study in Civil and Mining Engineering.

This department was established in 1888. Its object is to furnish along with other necessary studies, a thorough and complete course of training and practical work for the profession of engineering.

To enter this course of study, the student, if intending to apply for the degree of Bachelor of Civil Engineering must have completed the course of study of the Preparatory Department of the University or its equivalent except Greek.

The course of study for the degree of Bachelor of Civil Engineering is distributed over a term of four years, and includes the following subjects in the collegiate department, in addition to the engineering studies proper; Pure Mathematics, Physics, General Chemistry, Dynamical and Stratigraphical Geology and Mineralogy, French, Rhetoric, Psychology and Logic, Junior English and Drawing.

Course of Study for the Degree of Bachelor of Civil Engineering.

NOTE.—To enter this course the student must have completed the course of study in the Preparatory Department or its equivalent, except Greek.

FIRST YEAR.

Physics, Junior French; Trigonometry, Analytical Geometry, Junior English and Drawing.

SECOND YEAR.

Analytical Geometry, Calculus, Senior French, Geology, General Chemistry, Land Surveying, Theory of Roads and Railroads, Construction, &c.

THIRD YEAR.

Psychology and Logic, Mineralogy, Analytical and Applied Mechanics, Railroad Location, Stereotomy, Topography, Architecture, Mining, &c.

FOURTH YEAR.

Bridges and Graphics, Hydraulics and Sanitation Railroad Economy, Contracts and Reports, Plans, Specifications, Field Practice.

A written thesis will be required in the fourth year, of all candidates for the degree of Bachelor of Civil Engineering.

Course of Instruction in the Study of Civil Engineering.

PROF. JACKSON; MR. JOHNSTON.

The course in Engineering proper will cover the last three years and be distributed as follows:—

SECOND YEAR.

First Term—Land Surveying (Gillespie).
Second Term—Roads and Railroads (Gillespie).
Third Term—Leveling, Road and Railroad Construction.

THIRD YEAR.

First Term—Analytical and Applied Mechanics (Wood), Topography (Smith), Architecture (Weale).
Second Term—Applied Mechanics (Merriman), Descriptive Geometry (Faunce), Civil Engineering (Mahan).
Third Term—R. R. Location (Searles), Stereotomy (Warren).

FOURTH YEAR.

First Term—Bridges and Graphics (Merriman), Mining, General Engineering, Original Work.
Second Term—Hydraulics and Sanitation (Merriman), R. R. Economy (Wellington), Plans, Specifications, &c.
Third Term—Field Practice and Original Work.

Details of Course of Instruction in Engineering.

FIRST YEAR.

The studies of this year are confined to the Collegiate Department, and are substantially the same as for the first year in the Bachelor of Science course, except that a complete course in free hand, map and color drawing, is given by Mr. Johnston.

SECOND YEAR.

Surveying—In surveying the student will be given a complete course, both in the theory and practice. He will make his own surveys in the field, and necessary calculations. Each student must make an individual survey, lay off and divide up land, retrace old lines, &c., and do all that a county surveyor would be called upon to perform.
Roads and Railroads.—The theory of location, construction and maintainance of common roads, streets and railroads; the economy of location; grades, &c.
Leveling and Construction. The construction of roads and railroads, vertical surveying, calculating quantities in earthwork, mechanical structures, the profile and estimates.—MR. JOHNSTON.

THIRD YEAR.

Mechanics. A complete course in analytical and applied mechanics and strength of material, illustrated in actual tests in tensile, compressive and transverse strength.
Railroad Location.—All the details in the location of Railroads, curves, curve surveying, &c. Actual lines will be run, and each step in the survey studied, the reconnoissance, the preliminary line, the final location, the profile, grades, &c., staking out and estimate. Coal mining and the construction of mining plants, coke ovens, &c. —MR. JOHNSTON.
Stereotomy.—This subject will include masonry constructions, foundations, limes, cement. &c.—Mr. JOHNSTON.
Engineering.—Mechanical structures, pile construction, canal, river and harbor improvement—general engineering. During this year, the student will be required to construct topographical maps and contours, to locate railroads from contours, and field work in all branches covered up to date; also the study of architectural styles.—MR. JOHNSTON.

FOURTH YEAR.

Students who are candidates for the degree of B. E. are required to devote this year exclusively to engineering studies. The work during the year will include the theory of roofs and bridges. The working out of actual bridge practice, the designing of bridges and roofs and calculation of strains, Practical Hydraulics, the designing of Water Works, Sewerage Systems, &c., general field practice in Engineering, Contracts, Reports, Plans, Specifications, &c. The class will visit engineering works in progress, and make reports upon the same; will visit mines and report upon the methods of working; design original work in engineering structure, with the study and effect of contracts,

and make reports on new engineering works and projects. PROF. JACKSON.

NOTE.—A satisfactory written thesis will be required in the fourth year of all candidates for the degree of B. E.

As many young men who enter college are prevented from completing the course and taking a degree, it is intended in the course of engineering, to make practical application of theory as the course proceeds. Thus it is expected that a student who can take only the first year of the engineering course proper, will be a thorough master of the practical details of surveying, able to do any of the work required of an official county surveyor, such as identifying lines, mapping and locating surveys from papers, preparing jury maps in legal controversies concerning land; in short, thoroughly qualified as a practical surveyor.

At the end of the second year of the engineering course proper, the student is expected to be able to act as "Instrument man" on an engineering corps. And so, throughout the entire course, such practical work is given in the applications of engineering theory as will enable the student to begin his work fully equipped with the fundamental practice of his profession.

Students who do not expect to apply for a degree may take such studies in the school of engineering as they may be prepared for, as far as the arranged schedule of recitations may permit.

To facilitate instruction in this department the University has provided a large collection of field and other instruments. The field instruments consist of a Compass, Wye Level, (Buff & Beyer), Plain Transit, (Keuffel & Esser), complete Transit, (Buff & Byer), a Sextant, and a large supply of rods, level rods, chains, tapes and other accessories. Also all the hand and pocket instruments used in surveying, as Aneroid Barometers, Clinometers, Odometers, Field Glasses, Pedometers, Telemeter, Solar Attachments, Prismatic Compass, Hand levels (Locke & Abney's). The Department is also supplied with a *Riehle Brothers'* Testing Machine, with a capacity of 40,000 pounds, for testing tensile, compression and transverse strains; a complete set of U. S. Standard Weights and Measures; a full outfit of Drawing Instruments, including papers, &c.; a Blue Printing outfit, which process is made familiar to students; a fine selection of all the instruments used in office work, including fine Protractors, Trigonometer, and Engineer's Slide Rule. Students have every opportunity and are encouraged to familiarize themselves with the use of instruments.

Engineering Society.

Engineering students are expected to join the "Engineering Society." Its purpose is to discuss engineering subjects. Great benefit has already resulted from the organization. Students in engineering also usually join one of the Literary Societies of the University.

Bachelor of Civil Engineering Course—Schedule of Recitations.

TERM	Hour	FIRST YEAR	SECOND YEAR	THIRD YEAR.	FOURTH YEAR.
FALL TERM.	8½	Physics, M, W, Fr.	Dynamical Geology, T, Th. Calculus, M, W, Fr.	Mining Engineering, T, Th. Psychology, M, W, Fr.	Bridges and Graphics, M, T, W, Th. Fr.
	9½	French, M, T, W. Th, Fr	Surveying, M, T, W, Th.		
	10½	Trigonometry, M, T, W, Th	French, T, W, Th.	Mechanics, M, T, W, Th, Fr.	Contracts and Reports, T, Th
	11½	Rhetoric, T, Th, Fr	Chemistry, M, T, W.	Topography & Achitecture, M, W, Fr.	Field Practice.
	3	Drawing, T, Th	Field Practice, Fr and Sat.		Field Practice.
WINTER TERM.	8½	Physics, M, W. Fr.	Calculus, M, W, Fr.	Mining Engineering, T, Th. Psychology and Logic, M, W, Fr.	Hydraulics and Sanitation, M, T, W, Th. Fr.
	9½	French, M, T, W, Th, Fr.	Roads and Railroads, M, T, W, Th.	Descript. Geom., T, Th.	Plans, Specifications, T, Th.
	10½	Analyt. Geom., M, T, W, Th	Stratigraph. Geology, M, Fr. French, T, W, Th	Railroad Curves, T, Th. Strength of Materials, M, W, Fr.	Railroad Economics, M, W, Fr.
	11½	Eng Language, T, Th, Fr.	Chemistry, M, T, W.	Engineering, M, W, Fr.	Original Work.
	3	Drawing, T, Th.	Field Practice, Fr and Sat.		Original Work.
SPRING TERM.	8½	Physics, M, W, Fr.	Calculus, M, W, Fr.	Mineralogy, T, Th. Ethics, M, W, Fr.	
	9½	French, M, T, W, Th, Fr.	Leveling & R. R. Constr'n, M, T, W, Th		Field Practice during the Spring Term, Original Work and Lectures.
	10½	Analyt. Geom., M, T, W, Th	Stratigraphical Geology, M, Fr. French, T, W, Th.		
	11½	English Lit., T, Th, Fr.	Chemistry, M, T, W.	Railroad Location, M, T, W, Th. Fr.	
	3	Drawing, T, Th.	Field Practice, Fr and Sat.	Stereotomy, M, W, Fr.	

THE MILITARY DEPARTMENT.

Faculty and Instructors.

E. M. TURNER, LL. D.,
President.

E. S. AVIS, 1st LIEUT. 25th INFANTRY, U. S. A.
Professor of Military Science and Tactics.

CAPTAIN F. G. ROSS,
CAPTAIN T. D. LYNCH,
CAPTAIN M. D. POST,
Instructors in Tactics.

1st LIEUT. AND ADJUTANT, J. W. FRANCIS,
Instructor in Bayonet and Saber Exercises, and in Infantry Drill.

1st LIEUT. C. C. COFFMAN,
Instructor in Infantry Drill.

SERGEANT-MAJOR J. A. GRIER,
1st SERGEANT G. M. ALEXANDER,
Assistant Instructors in Infantry Drill.

QUARTERMASTER-SERGEANT J. R. TROTTER,
Instructor in Target Drill and in Artillery Drill.

COLOR-SERGEANT C. W. GORE,
Assistant Instructor in Bayonet and Saber Exercises.

SERGEANT G. M. FORD,
Instructor in Signalling.

SERGEANT C. E. VANCE,
SERGEANT J. T. HOLBERT,
Assistant Instructors in Target Drill and in Artillery Drill.

CORPORAL G. E. SINGLETON,
COLOR-CORPORAL K. WHITE,
Assistant Instructors in Bayonet and Saber Exercises.

SIGNAL-CORPORAL W. A. BURDETTE,
Assistant Instructor in Signalling.

1st LIEUT. AND ADJUTANT J. W. FRANCIS,
2nd LIEUT. A. B. COOPER,
SERGEANT-MAJOR J. A. GRIER,
QUARTERMASTER-SERGEANT J. R. TROTTER,
COLOR-SERGEANT C. W. GORE,
SERGEANT J. T. HOLBERT,
SERGEANT A. K. MARTIN,
CORPORAL E. T. HARTMAN,
CORPORAL M. BABB,
Instructors of New Cadets.

COURSE OF INSTRUCTION IN THE MILITARY DEPARTMENT.

APPOINTMENT OF CADETS.

Under the law of the State, eight cadets may be appointed from each Senatorial District, by the Regent of said district, who receive tuition, books and stationery free; but not more than five cadets may be appointed from any one county. Books and stationery are not furnished to professional students.

Such cadets must not be less than sixteen, nor more than twenty-one years of age, and must present to the Regent appointing them, evidence of good moral character.

When an appointment to a cadetship is desired, application should be made to the Regent of the district in which the young man lives. The application should set forth the age, name and residence of the applicant, and should contain a physician's certificate of general good health and development. The commandant of cadets, or the President, will be glad to answer any inquiry on the subject.

The following table will show the counties composing the several districts—the names of the Regents are prefixed to this catalogue:

District I.	Hancock, Brooke, Ohio.
District II.	Marshall, Wetzel, Marion.
District III.	Ritchie, Doddridge, Harrison, Tyler.
District IV.	Pleasants, Wood, Wirt, Gilmer, Calhoun.
District V.	Mason, Jackson, Roane.
District VI.	Putnam, Cabell, Wayne.
District VII.	Lincoln, Logan, Wyoming, McDowell, Mercer, Raleigh.
District VIII.	Greenbrier, Pocahontas, Monroe, Summers, Fayette.
District IX.	Kanawha, Clay, Nicholas, Braxton, Boone.
District X.	Lewis, Randolph, Upshur, Barbour, Webster.
District XI.	Preston, Monongalia, Taylor.
District XII.	Hampshire, Hardy, Grant, Mineral, Pendleton, Tucker.
District XIII.	Berkeley, Jefferson, Morgan.

Besides the State cadets, other students are permitted to join the corps, for the benefit of drill and exercise. All cadets are enlisted for not less than two, nor more than five years, and are not permitted to resign before the expiration of the two years, except for cause.

UNIFORM.

A neat uniform of cadet gray is worn. The cap, trousers and blouse, or drill coat, constitute the uniform. Cadets will keep this in view when joining. Insignia of rank are worn on the blouse, and

on the dress coat; straw hats can be worn in summer, when not on military duty.

Furloughs are granted to cadets who have served two years in the corps, to teach during the winter term.

The University has an ample equipment for both Infantry and artillery and is supplied with ammunition by the Ordnance Department U. S. Army.

RESIGNATION AND DISCHARGE.

Cadets who do not expect to return to the corps in September, should send their resignations to the Commandant or to the President about August 15th. Those who do not intend to return and fail to send this notice, prevent some one from obtaining an appointment. It is but justice to others that their intention to stay away should be known as soon as possible.

Cadets, who, expecting to return, find themselves unable to report on the first day of the Fall term, should state their seasons in writing to the Commandant or to the President before the first day of the term, and ask for leave of absence to cover the time they will be necessarily absent.

All cadets who fail to report on the first day of the Fall term, and who have not obtained leave of absence, will be discharged and the Regent notified of the vacancy.

PRACTICAL AND THEORETICAL INSTRUCTION.

The annual course in drill for the corps, is as follows:

Fall term—Instruction of New Cadets, Company and Battalion Drill, Bayonet Exercise, etc. All officers exercise command and are inspected as in the Regular Army.

Winter term—Target Drill, Bayonet Exercise, Sabre Exercise, Manual, Setting Up, School of the Soldier, Recitations and Lectures, Signaling.

Spring Term.—Company and Battalion Drill, Artillery Drill, Sabre Exercise, Signaling, Target Practice, etc. Captains and members of the graduating class will command the battalion and be inspected.

Inspection will take place every Monday during the year. Dress Parades, Reviews and Guard-Mountings will take place from time to time.

Recitations for the non-commissioned officers will be held by the Captains under the general supervision of the Commandant.

Lectures will be upon the following subjects:

Arms and Ammunition; Tactical and Administrative Units; Ground and Outposts; Outposts and Patrols; Reconnoitering; Marching; Advanced and Rear, and Flank Guards; Tactical Use of Infantry; Tactical Use of Cavalry; Tactical Use of Artillery; Tactics of the Three Arms Combined; Attack and Defense; Operations by Night; Rivers; Defiles; Villages; Woods; Convoys; Field-Works; Strategy; Customs of the Service; Official Papers, etc.

The officers and non-commissioned officers are required to exercise the command and to perform the duties of their offices as in the Regular Army. It is believed that such training will improve the young men physically and prepare them to be of great use to their country in case of need.

In the report of The Inspector-General of the Army, for the year 1890, Capt. W. F. Reynolds, and 2nd Lieut. J. W. Francis are complimented, by the officers who inspected this College, for the manner in which they executed movements under his inspection.

BATTALION ORGANIZATION.

COMMANDANT OF CADETS.

E. S. Avis, 1st Lieut. 25th U. S. Infantry.

SURGEON.

J. W. Hartigan, Professor.

BATTALION STAFF.

Francis, J. W., (1) 1st Lieut. and Adjutant.

NON-COMMISSIONED STAFF.

Grier, J. A., Sergeant-Major.
Trotter, J. R. Quartermaster-Sergeant.

COLOR-GUARD.

Gore, C. W., (1) Color-Sergeant.
Thayer, A. L., (2) Color-Corporal.
Garlow, E. C. (3) Color-Corporal.
White, K., (10) Color-Corporal.

BAND.

Burley, J. L.....1st Bb Clarinet.
Carrigan, C. E.....Solo Alto.
Conn, G. H. .....1st Eb Cornet.
Ellis, J. R.....Solo Bb Cornet.
Greynolds, L.....2nd Eb Alto.
Hartley, A. C .....1st Bb Tenor.
Hogg, G.....2nd Bb Cornet.
Kinkaid, D. B .....1st Bb Cornet.
Leonard, W. C.....Snare Drum.
McEldowney, S. B .....Tuba.
McWhorter, J. C.....Piccolo.
Minshall, F. M.....Bb Baritone.
Moore, J. M.....Cymbals.
Oesterling, H. E.....Bass Drum.
Sisler, M. T .....2nd Bb Tenor.

Company A.	Company B.	Company C.
Captains:		
Ross, F. G. (1)	Lynch, T. D. (2)	Post, M. D. (6)
First Lieutenants:		
Hayes, U. S. G. (2)	Duvall, C. R. (3)	Cellman, C. C. (4)
Second Lieutenants:		
Lemley, C. McC. (1)	Cooper, A. B. (3)	Sisler, C. B. (2)
First Sergeants:		
Meyer, W. C. (1)	Alexander, G. M. (2)	Smith, A. B. (3)
Sergeants:		
Ford, G. M. (2)	Holbert, J. T. (5)	Vance, C. E. (4)
Smith, H. W. (3)	Martin, A. K. (7)	Ramsey, R. H. (6)
Corporals:		
Hartman, E. T. (4)	Paul, J. W. (1)	Babb, M. (5)
Wiles, J. W. (6)	Singleton, G. E. (7)	Jaco, L. M. (8)
Morris, C. E. (9)	Bennett, C. M. (11)	Burdette, W A. (12) [Sig'l]
Minshall, F. M. (15)	Vance, J. C. (13)	Rogers, W. D. N. (14)

GENERAL ROSTER OF STATE CADETS.

Those marked (g) belong to the graduating class.
*County to which accredited.

DISTRICT I.—*J. B. Somerville, Regent.*

	Name.	*County.*	*When Enlisted.*	*Company.*
1	Meyer, W. C.	Ohio	Aug. 31, 1887	A
2	Morris, C. E.	Ohio	Sept. 4, 1889	A
3	Martin, A. K.	Barbour *Brooke	Feb. 22, 1890	B
4	Bambrick, G. L.	Hancock	Sept. 10, 1890	B
5	Downing, T. F.	Ohio	Sept. 10, 1890	C
6				
7				
8				

LOSS.

1 Cox, F. C., resigned September 10, 1890.
2 Garvin, C. E., resigned January 7, 1891.
3 McCoy, G. L., resigned March 23, 1891.

DISTRICT II.—*Clarence L. Smith, Regent.*

1	Francis, J. W.	Marshall	Nov. 13, 1886	Staff
2	Lemley, C. Mc., (g)	Wetzel	March 9, 1887	A
3	Holoert, J. T.	Marion	Sept. 4, 1888	B
4	White, K.	Marshall	Dec. 2, 1888	C
5	Carrigan, C. E.	Marshall	Sept. 4, 1889	B
6	Thomas W. M.	Marion	March 11, 1890	C
7	Bennett, C. J. C.	Marion	Sept. 10, 1890	A
8	Krebs. C. E.	Wetzel	Sept. 10, 1890	A

LOSS.

1 Clark, F. W., graduated June 11, 1890.

DISTRICT III.—*Peregrin Hays, Regent.*

1	Post, M. D,, (g)	Harrison	Sept. 1, 1886	C
2	Lynch, T. D., (g)	Harrison	Sept. 10, 1886	B
3	Coffmann, C. C.	Harrison	Oct. 18, 1887	C
4	Hughes, J. W.	Gilmer	Sept. 10, 1890	A
5	Pearcy, C. S.	Gilmer	Sept. 10, 1890	C
6	Hood, C. P.	Harrison	Jan. 26, 1891	B
7				
8				

LOSS.

1 Brannon, H., resigned January 7, 1891.
2 Davis, J. H., discharged November 1, 1890.
3 Jackson, J. M. resigned September 10, 1890.
4 Lynch, W. E., resigned January 28, 1891.
5 Smith, E. G., resigned September 10, 1890.
6 Wallis, E. S., discharged September 10, 1890.

DISTRICT IV.—*D. D. Johnson, Regent.*

1	Smith, H. W.	Tyler	Sept.	1, 1886	A
2	Grier, J. A	Wood	March	15, 1887	Staff
3	Cooper, A. B. (g)	Wood	Jan.	24, 1888	B
4	Barnett, O.	Wood	Sept.	10, 1890	A
5	Leonard, W. C.	Wood	Sept.	10, 1890	C
6	Steed, H. A.	Wirt	Sept.	10, 1890	B
7					
8					

LOSS.

1 Pierpoint, P. L., discharged November 1, 1890.
2 Steele, G., resigned September 10, 1890.

DISTRICT V.—*John G. Schilling, Regent.*

1	Gore, C. W.	Harrison *Mason	Sept.	19, 1888	C
2	Ramsay, R. H	Harrison *Jackson	October	12, 1888	C
3	Vance, C. E	Harrison *Roane	March	27, 1889	C
4	Moore, J. M.	Mason	October	23, 1889	B
5	Nuzum, J	Jackson	March	11, 1890	A
6	Chambers, B. W.	Roane	April	7, 1891	not assigned
7	Chambers, A. J	Roane	April	7, 1891	" "
8	Simmons H. J	Roane	April	9, 1891	" "

LOSS.

1. Clark, J. B., resigned September 15, 1890.

DISTRICT VI.—*E. A. Bennett, Regent:*

1	Burdette, W. A	Cabell	Nov.	26, 1888	C
2	Dudding, J	Putnam	Sept.	10, 1890	C
3	Johnson, T. C.	Tyler *Cabell	Sept.	10, 1890	B
4	Peters, S. V	Wayne	Sept.	10, 1890	A
5	Duncan, H. C.	Wayne	Jan.	14, 1891	C
6					
7					
8					

LOSS.

1 Alexander, A. S., discharged September 10, 1890.
2 Lewis, W, H., resigned March 27, 1891.
3 McCoy, E. D., resigned April 8, 1891.
4 McMillen, H. C., resigned February 17, 1891.
5 Thomas, W. J., resigned June 1, 1890.
6 Vinson, L. B., Resigned January 21, 1891.
7 Wilson, W. L., resigned January 21, 1891.

DISTRICT VII.—*W. A. French, Regent.*

1	Jaco, L. M.	Monongalia *Boone	Oct.	5, 1887	C
2	Bennett, C. M.	Gilmer *Raleigh	Sept.	4, 1889	B
3	Paul, J. W.	Preston *Mercer	Jan.	22, 1888	B
4	Herndon, I. C.	Mercer	Sept.	12, 1890	B
5					
6					
7					
8					

LOSS.

1. Pierce, W., resigned September 15, 1890.

DISTRICT VIII.—*M. J. Kester, Regent.*

1	Ford, G. M	Monongalia *Monroe	Jan.	30, 1888	A
2	Vance, J. C.	Harrison *Greenbrier	Sept.	4, 1889	B
3	Hogg, G.	Mason *Fayette	Sept.	4, 1889	B
4	Hartley, A. C.	Preston *Pocahontas	Sept.	10, 1890	A
5	Jones, C. R.	Taylor *Summers	Sept.	10, 1890	C
6	McEldowney, S. B.	Wetzel *Summers	Sept.	10, 1890	B
7					
8					

LOSS.

1 Beard, H. L., resigned May 1, 1890.
2 Keadle, R. L., discharged September 10, 1890.
3 Leach, E., resigned May 1, 1890.

DISTRICT IX—*J. F. Brown, Regent.*

1	Trotter, J. R. (g)	Preston *Clay	October	8, 1887	Staff
2	Singleton, G. E.	Braxton	Sept'r	4, 1888	B
3	Allen, W.	Kanawha	Sept'r	10, 1890	B
4	Kinkaid, D. B.	Taylor *Nicholas	Sept'r	22, 1890	C
5					
6					
7					
8					

LOSS.

1 Reynolds, F. C., graduated June 11, 1890.
2 Calvert, W. J., resigned September 12, 1890.
3 Cunningham, J. B., resigned September 10, 1890.

DISTRICT X.—*Thomas J. Farnsworth, Regent.*

1	Hayes, U. S. G. (g)	Barbour	Sept.	1, 1885	A
2	Thayer, A. L.	Taylor	Sept.	4, 1888	C
3	Edmiston, M. A.	Lewis	Sept.	10, 1890	C
4	Greynolds, L.	Randolph	Sept	10, 1890	C
5	Kitson, G. H.	Lewis	Sept.	10, 1890	B
6	McWhorter, J. S.	Upshur	January	7, 1891	B
7	Kunst, G. H. A	Taylor	April	14, 1891	A
8					

LOSS.

1 Brannon, E. A., resigned January 7, 1891
2 Bennett, J. B., resigned January 9, 1891.
3 McWhorter, J. S., discharged September 10, 1890.
4 Ward, T. H., discharged September 10, 1890.
5 Callihan, O. C., discharged April 8, 1891.

DISTRICT XI.—*Joseph Moreland, Regent.*

1	Alexander, G. M.	Monongalia	Sept.	1, 1886	B
2	Wiles, J. W.	Preston	Sept.	8, 1887	A
3	Garlow, E. C.	Monongalia	Nov.	4, 1887	C
4	Warman, A.	Monongalia	Sept:	4, 1889	B
5	Ellis, J. R.	Preston	Sept.	9, 1889	B
6	Hartman, E. T.	Preston	Nov.	26, 1889	A
7	Henderson, J. L.	Monongalia	Feb.	12, 1890	A
8	Ridgway, C. N	Monongalia	Sept.	10, 1890	A

LOSS.

1 Lazier, A. M., resigned September 10, 1890.

DISTRICT XII.—*John A. Robinson, Regent.*

1	Minshall, F. M.	Mineral	August	31, 1887	A
2	Babb, M.	Grant	Sept.	4, 1889	C
3	Daily, R. W.	Hampshire	Sept	10, 1890	B
4					
5					
6					
7					
8					

LOSS.

1 Allender, C. R., discharged September 10, 1890.
2 Knight, C. R., discharged January 15, 1891.
3 McGahan, H., discharged January 14, 1891.
4 Miller, C. F., resigned January 14, 1891.
5 Reynolds, F. C., graduated June 11, 1890.

DISTRICT XIII.—*W. W. Brown, Regent.*

1	Sisler, C. B.	Monongalia Morgan	Sept.	1, 1886	C
2	Duvall, C. R. (g)	Berkeley	August	31, 1887	B
3	Davenport, B.	Jefferson	Sept.	12, 1889	A
4	Johnson, G. W.	Jefferson	Sept.	10, 1890	A
5					
6					
7					
8					

LOSS.

1 Hanshaw, J. E., discharged October 21, 1890.
2 Vickers, E. H., graduated June 11, 1890.

VOLUNTEERS.

1	Ross, F. G (g)	Dunkard, Pa	March	8, 1887	A
2	Smith, A. B	Fayette county Pa	Sept'r	10, 1888	C
3	Rogers, W. D. N	Scottdale, Pa	Sept'r	4, 1889	C
4	Oesterling, H. A	Wheeling, W. Va	Sept'r	18, 1889	C
5	Boyd, A. E	Uniontown, Pa	Sept'r	10, 1890	B
6	Boyd, S. P	Uniontown, Pa	Sept'r	10, 1890	C
7	Duvall, R. P	Jordan's Spr'gs Va	Sept'r	10, 1890	A
8	Johnson, J. M	Long Reach, W.Va	Sept'r	10, 1890	C
9	Link, C. W	Duffields, W. Va	Sept'r	10, 1890	B
10	Pearcy, E	Normant'n, W.Va	Sept'r	10, 1890	C
11	Schoonmaker, G. F	Uniontown, Pa	Sept'r	10, 1890	B
12	Schoonmaker, R. D	Uniontown, Pa	Sept'r	10, 1890	C
13	Corpening, W. J	Bridgeport, W.Va	Oct.	31, 1890	A
14	McWhorter, J. C	Upshur co., W.Va	January	7, 1891	B

LOSS.

1 Hughart, G. E., discharged September 10, 1890.
2 Knight, C. R., appointed cadet 12th, Dist., April 25, 1890.
3 Shaffer, P. A., resigned March 3, 1891.
4 Smith, E. G., resigned May 29*, 1890.
5 Smith, W. F., resigned May 29, 1890.
6 Stifel, H. G., resigned January 7, 1891.*
7 Welton, A. J., discharged December 8, 1890.
8 Willis, W., resigned January 15, 1891.
9 Kunst, G. H. A., appointed cadet 10th Dist., April 14, 1891.

THE LAW DEPARTMENT.

FACULTY.

E. M. TURNER, LL.D., PRESIDENT.

ST. GEORGE T. BROOKE, LL.D.,

Professor of Common and Statute Law.

WILLIAM P. WILLEY, A. M.,

Professor of Equity Jurisprudence and Mercantile Law.

COURSE OF STUDY IN THE LAW DEPARTMENT.

The Law Department of the University aims to prepare students for the practice of Law in any part of the United States.

It aims to make not merely *theoretical* but *practical* lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession.

It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of his profession, and to start him in life with a high tone of professional ethics and dignity.

The degree of Bachelor of Laws is conferred upon graduates in this department. By recent act of the Legislature graduates of the University Law School are admitted to practice in any of the courts of this State without examination.

The full course covers the branches of Common and Statute Law, Constitutional and International Law, Commercial Law, Criminal Law, Maritime Law, Equity Jurisprudence, Evidence, Pleadings and Practice.

Common and Statute Law, &c.

PROF. ST. GEORGE T. BROOKE.

The text-books used in the course of Common and Statute Law are Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, 1st Greenleaf on Evidence; and for *reference* the Code of West Virginia, and subsequent Acts of the West Virginia Legislature.

The text-books will be supplemented by lectures each day, and it will be the endeavor so to incorporate in them the statutory changes in the Common Law, as to render it unnecessary for students from other States to incur the expense of purchasing the West Virginia Code and subsequent statutes.

The text-book used in Constitutional Law is the "Fœderalist." This, however, is supplemented by lectures upon our Constitutional History from the Colonial period through the Continental and Confederation eras successively, to the adoption of our present Constitution in 1788. The Constitution itself, and those decisions of the Supreme Court of the United States, interpreting its provisions, is also the subject of lectures

The text-book used in International Law is Woolsey's Introduction to the Study of International Law.

Equity Jurisprudence, Mercantile Law, &c.

PROF. W. P. WILLEY.

In the branches of Equity Jurisprudence and Mercantile Law, the text-books are Adams' Equity and Smith's Mercantile Law, with *reference* to Parsons, Story, and other authors.

The course of lectures and study will embrace:

The Origin and History of Equity Jurisprudence;

The general heads of Equity Procedure, and the nature and scope of Equity Jurisprudence;

Some special heads of Equity Jurisprudence.

Equity Pleadings and Practice.

Lectures on Mercantile Law will embrace the whole range of topics properly belonging to this department, including the law relating to

Mercantile Persons, Traders, Partners, Joint Stock Companies, Corporations, Principal and Agent; the Law of Mercantile Property Mercantile Contracts, such as Bills of Exchange and Promissory Notes, Contracts with Carriers, Insurance, Hiring and Service, Sales, Guarantees, Mercantile Remedies, &c.

The lectures will be supplemented by practical application of the principles in the Moot Courts.

Terms and Topics.

Three terms constitute the school year, and the entire course of instruction is covered by the lectures within the year, thus enabling the student to complete the course and become a candidate for graduation at the end of that period. A majority of the students do so; but it is optional with the student to give one year or two to the course. This must be determined by the degree of culture and the qualifications of the student when commencing the course. Many students prefer to take two or three branches of study in the Academic Department in connection with their law studies and divide the law course into two years, which is always advisable if the student is deficient in general culture, and preparation for the course.

The Two Years Course.

When dividing the course into two years, the first year will include Blackstone's Commentaries and the statute law of the State—lectures three times a week together with Commercial Law three times a week in Fall and Spring terms; to which may be added, if the student is competent, Constitutional or International Law.

As one term is not much dependent upon another, as respects many of the topics, a student may enter at the beginning of either term, but it is always advisable to enter at the beginning of the Fall term if possible.

The work of the year is divided among the tree terms, as follows:

FALL TERM.

Rights of Persons and Things—Blackstone. International Law. Common Law Pleadings	PROF. BROOKE.
Contracts. Negotiable Instruments. Equity Pleading. Evidence.	PROF. WILLEY.

WINTER TERM.

Constitutional Law. International Law. Blackstone, 1st and 2d books (continued) Blackstone, 3d and 4th books (begun).	PROF. BROOKE.
Agency. Partnership. Suretyship and Guaranty. Practice in the Courts. Equity—Accidents, Mistakes, Frauds, &c. Evidence.	PROF. WILLEY.

SPRING TERM.

Constitutional Law (continued). Criminal Law, &c., Blackstone, 3d and 4th books (continued). Real Property.	PROF. BROOKE.
Bailments. Corporations. Practice in the Courts. Insurance. Equity.	PROF. WILLEY.

Methods of Instruction.

The methods of instruction consist of Lectures and Examinations from approved text books read in course; the drawing of the various legal papers requisite in the ordinary practice of the law; the Moot Courts.

Each day before the lecture, there is an oral examination on the subject of the lecture of the preceding day, and of such portions of the text-books as were the subject of the lecture.

Besides the daily examinations there will be rigid and comprehensive examinations on each topic as completed, and for candidates for graduation a review examination on the entire course. They will all be in writing.

Moot Courts.

However familiar the student may be with the text-books and with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the Bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled in this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial table. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice, to bring suits' draw papers, pleading, briefs, &c., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the arguments, charge, verdict, motion in arrest of judgment, writ of error, &c. The Moot Court is organized and conducted in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning, by actual doing, all the forms of court practice, while a Professor sits as Judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review by the Professor, and young men are thus fitted to appear and conduct themselves at the Bar as gentlemen as well as lawyers.

Requirements for Admission and Degrees.

Any person is at liberty to matriculate in this department, and have a seat assigned him for attendance upon the lectures. If, however, the person applying for admission intends to be a candidate for the degree of Bachelor of Laws, he must have reached such an age and made such attainments in general education as shall satisfy the Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed.

In September of each year an examination in the ordinary English

branches will be held by the two law Professors and the President of the University, of all students who are candidates for the degree of Bachelor of Laws during that year. Any student found deficient at this examination will be required to pursue those branches in the classes of the University, in connection with his law studies. The examination will include the correct writing of ordinary English.

The degree of Bachelor of Laws will be conferred only upon those who are able to pass a rigid examination upon the entire course. The value of a diploma from this department will never be impaired by conferring it where it is not merited and has not been fairly won.

No degree will be conferred on any student who has not been in attendance upon the lectures for at least nine months, no matter what his previous reading may have been.

Expenses.

The tuition fee in the Law Department is $50 per term.

The ordinary expenses for boarding, &c., are quite as low as any other University town in the United States.

A summary of the expenses of boarding, &c., as given on a preceding page of this catalogue, is carefully made, and may be relied upon as a guide to those who contemplate entering the law department.

The text books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Cost of Books.

The text books essential to the successful prosecution of the work of the law schools are the following, namely: Blackstone's Commentaries, Stephen on Pleading, Williams on Real Property, Greenleaf on Evidence (Vol. I.), Smith's Mercantile Law, Adams' Equity, The Federalist, Wooley's Constitutional Law.

The cost of these books if purchased new, is about $300. They can be obtained "second-hand" at from $200 to $150. Students whose means are limited usually club together and thus purchase the books desired at very low prices at "second-hand."

Advantages of a University Law Course.

The increasing favor with which Law Schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in the profession, as compared with a past age. The ambitious lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a profound mastery of the principles of law. Law schools, themselves, have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the Medical College and Theological Seminary are to the medical and clerical professions, respectively.

To the young man who aspires to become thoroughly fitted for the profession of law, the advantages of a University course can scarcely be overestimated. Without these advantages he is almost certain to make the mistake of entering upon the practice before he is prepared for it, and experience is constantly proving the old maxim that "he who is not a good lawyer when he comes to the bar, will seldom be a good one afterwards."

It is almost the universal experience that when a young man sits down in a law office to prepare for the bar, he becomes impatient to engage in the active business of his profession with which he is surrounded; he makes haste to finish rather than master the course; the

active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention; he reads in a superficial manner enough branches to enable him to secure license to practice, flattering himself with the thought that he will have time enough when he is already admitted to the bar to finish his studies. But when once at the bar the books are thrown aside, and that thorough preparation which makes the ground work of a successful professional career is forever neglected.

Besides insuring a higher degree of proficiency, the University course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining, and produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

Added to these considerations are the advantages of access to a large and well selected law and miscellaneous library, and the valuable drill of the Literary Societies.

Any information relative to this department will be cheerfully given in reply to inquiries.

THE PREPARATORY DEPARTMENT.

E. M. TURNER, LL. D., *President*

A. W. LORENTZ, A. M.,
Principal, and Instructor in Latin.

JAMES S. STEWART, M. S.,
Instructor in Mathematics.

A. J. HARE, A. B.,
Instructor in Latin and Greek.

E. H. VICKERS, A. B.,
Instructor in English and Mathematics.

Comparatively few young men in West Virginia have home advantages for properly and fully preparing themselves to enter upon regular College studies. The Preparatory Department has proved a fruitful source of supply for the higher classes, and also the means of maintaining an elevated grade of preliminary scholarship for admission to them. As the High Schools, Academies and Graded Schools of the State increase in number and efficiency, in the same proportion will the necessity for this department diminish. Meanwhile, and until their increase and fuller development, it cannot be dispensed with without lowering the standard of collegiate study proper, or shutting out from the advantages of the University many of the best and most promising young men of the State.

Nowhere else can young men be better prepared for advanced studies, or if this is not contemplated, accomplish more thoroughly and advantageously such studies as are here provided.

Course of Study.

The course of study in the Preparatory Department aims to prepare young men for admission to the higher classes in the University.

Candidates for entrance should be at least fifteen years old and should have *thoroughly* accomplished the ordinary course of study in the common schools of the State, including Arithmetic through common fractions; the elements of English Grammar; Geography; Orthography.

No special examination is required for entrance into the Junior class of the Preparatory school. Students are classed according to their apparent advancement, and are admitted *on trial* for the first term.

If a student fails to make a *general average* of 6 or a scale of 10 for the Fall term in the first, or Junior Year, he is not allowed to go on. For the remaining terms he is required to make an average of 7 in every study in order to be promoted at the end of the year. In the second or Senior Year each student is required to make an average of 6 *in each study* for the Fall Term. If he fails to do this, he is required

to take the junior year on that study over again, if it is a two year study. If it is not a two year study, he cannot be passed in that study at the end of the year. After the Fall term, each student in the Senior year must make an average of 7 each term in every study in order to be promoted at the end of the year.

The course of study in the Preparatory Department is arranged as follows:

Junior Year.

FALL TERM.

Arithmetic — Greenleaf's Complete—from Common Fractions to Discount .....5 hours a week
English Grammar—(Swinton)—Etymology .....5 hours a week
Latin (commenced) .....5 hours a week

WINTER TERM.

Arithmetic (completed).....3 hours a week
English Grammar—Syntax and English Comp.....5 hours a week
Latin—Grammar and Reader—Chase & Stuart.....5 hours a week
Algebra—Wells' Academic—to Fractions.....2 hours a week

SPRING TERM.

Algebra—Wells' Academic (completed) .....5 hours a week
English Grammar—Anal., Pros. and English Comp ...5 hours a week
Latin—Grammar and Reader.....5 hours a week

NOTE—Students in the Junior Year of the Preparatory are not allowed to take any other studies than the above,

The classes in the Junior Year are usually taught in two or three divisions. At the end of the Fall term the divisions are re-arranged *according to scholarship*, and those who are not proficient are required to go over the work again, or given special instruction adapted to their needs.

At the end of the Junior Year, students who are not proficient in any study, are required to take the same study the next year.

Senior Year.

FALL TERM.

Algebra—Wells' University—Fractions to Imaginary Quantities .....2 hours a week
Cæsar (two books)—Latin Grammar.....5 hours a week
Greek—Grammar and Reader (Goodwin) .....5 hours a week
Geometry—Wells'—Books 1 and 2.....2 hours a week
Book-keeping.....3 hours a week
English Composition—Williams.....1 hour a week
Free-hand Drawing.....2 hours a week

WINTER TERM.

Algebra—Imaginary Quantities to Binomial Theorem.2 hours a week
Cicero's Orations (three orations)—Chase & Stuart's Grammar .....5 hours a week
Greek—Grammar and Reader .....5 hours a week
Geometry—Books 3, 4 and 5.....2 hours a week
Book-keeping .....3 hours a week
English Composition, &c.....1 hour a week
Free-hand Drawing.....2 hours a week

THIRD TERM.

Book-keeping	3 hours a week
Algebra (completed)	2 hours a week
Geometry (completed)	2 hours a week
Virgil—Two Books of Æneid; Latin Grammar	5 hours a week
Xenophon's Anabasis (two books); Greek Grammar	5 hours a week
English Composition, &c.	1 hour a week
Drawing	2 hours a week

NOTE.—Candidates for the degree of Bachelor of Sciences are not required to take Greek. Candidates for the degree of Bachelor of Arts are not required to take Book-Keeping.

Normal School Certificates.

By the recent joint action of the Regents of the University and those of the Normal School and its branches, there is now opened in each of the Normal Schools an "Academic Department," embracing the course of study pursued in the Preparatory Department of the University. Students who complete that course in a Normal School and pass a satisfactory examination are admitted, upon certificate of the Principal of the school, to the classes of the University without further examination. It is hoped and expected that these additional facilities will be used by many young men living in the vicinity of the Normal Schools, to obtain their preparatory training at comparatively little expense. They will thus be enabled to husband their means so as to take a full course in the higher classes at the University.

Approved High Schools.

In order to secure the higher usefulness of the West Virginia University to the young men of the State, as well as to encourage the establishment of high schools and academies in the various sections and counties thereof, the Faculty of the University have adopted the following plan which they submit for the consideration of those interested in the work of higher education in this State.

It is confidently believed that this scheme, if generally encouraged, will, in a few years, result in the establishment of good preparatory schools and academies in various parts of the State, where not only many of those who will go to the University may get their preparatory training at less expense, but also many teachers in the primary schools will be enabled to get that additional knowledge and training so necessary to the successful prosecution of the work of primary teaching. Thus the whole public school system may be elevated and sustained on a high plane, and the expenditure for public school instruction made productive of better results than can be attained under existing circumstances. The plan is as follows:

Any high school, graded school or academy may be approved by the West Virginia University as a preparatory school by complying with the following conditions:

1st. By establishing, in addition to the usual primary and grammar grades, a course of study the same as that pursued in the Preparatory Department of the University, or its equivalent, under the instruction of competent teachers.

2d. By making application to the Faculty of the University for a visiting committee to examine the methods and work of such school for the purpose of ascertaining the character of the instruction given.

3d. Upon such application a committee of the Faculty, not exceeding two in number, will be appointed to visit such school, and upon favorable report from such committee the Faculty will approve such school as a preparatory school for a term of four years. The ex-

penses of the committee will be paid, one-half by the University, the other half by the school making application.

4th. This approval will entitle the students who complete the prescribed preparatory course of study in such school, to enter the Collegiate Department of the University without examination, upon the certificate of the Principal of such school that students have, within the fifteen months next preceding their coming to the University, completed the course and passed an examination thereon with a standing of 7 in a scale of ten.

5th. The Faculty reserve the right to withdraw such approval, if, after the admission of students, the character of the work done at such school shall be found to be below the standard required for admission to the University classes, or if certificates are given to students who, having been found deficient after their admission, cannot pass a fair test examination in the prescribed courses of preparatory studies.

6th. At the expiration of the term of four years, the approval may be renewed upon application, if the work previously done has been satisfactory.

A list of the schools approved by the University will be published from time to time in the annual catalogue.

The co-operation of those interested in the work of higher education, who believe in building up our own institutions, is earnestly solicited in developing and encouraging this scheme.

The following schools have been approved under this plan:

Linsley Institute, Wheeling; Parkersburg High School (except Greek); Western Pennsylvania Classical and Scientific Institute, Mt. Pleasant, Pa.; Normal and Classical Academy, Buckhannon, W. Va.; Greenbrier Academy, Alderson, W. Va.; Morgantown High School (except Greek); Charleston High School (except Greek.)

NOTE.—In several of these schools Greek is not taught.

Schedule of Recitations—Preparatory Department.

	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.
MONDAY.	Senior Latin I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law, Arithmetic II. English Grammar I.	Senior Latin II. Junior Latin II. English Grammar II.	Preparatory English. Junior Latin III. Arithmetic III.
TUESDAY.	Senior Latin I. Senior Algebra I. Junior Latin I. Arithmetic I.	Greek. Arithmetic II. English Grammar I.	Senior Latin II. Senior Algebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
WEDNESDAY.	Senior Latin I. Geometry I. Junior Latin I. Arithmetic I.	Greek, Book-keeping and Commercial Law, Arithmetic II. English Grammar I.	Senior Latin II. Geometry II. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.
THURSDAY.	Senior Latin I. Senior Alcebra I. Junior Latin. Arithmetic.	Greek. Arithmetic II. English Grammar I.	Senior Latin II. Senior Algrebra II. Junior Latin II. English Grammar II.	Drawing. Junior Latin III. Arithmetic III.
FRIDAY.	Senior Latin I. Geometry I. Junior Latin. Arithmetic.	Greek, Book-keeping and Commercial Law. Arithmetic II. English Grammar I.	Senior Latin II. Geometry II. Junior Latin II. English Grammar II.	Junior Latin III. Arithmetic III.

CATALOGUE OF STUDENTS.

Alexander, George Milton	Morgantown	Coll., Law
Allen, Robert E. Lee	Lima, Tyler co	Prep. & Coll
Allen, William Henry	Coal Valley, Fayette co	Prep
Babb, Maeker	Medley, Grant co	Prep. & Coll
Bailey, Benjamin Franklin	Tyrconnell, Taylor co	Law
Bambrick, George Loren	New Cumberland, Hancock co	Prep
Barracklow, Henry Waters	Dunbar, Pa	Prep
Barnett, Oscar William	Lockhart's Run, Wood co	Prep
Bennett, Charles J. C	Fairmont	Coll
Bennett, Cary M	Bennett, Gilmer co	Prep. & Coll
Bennett, John Brannon	Weston, Lewis co	Prep
Boggess, Squire Early	Spencer, Roane co	Law
Boyd, Alpheus Edward	Uniontown, Pa	Prep
Boyd, Samuel Patterson	Uniontown, Pa	Prep
Brannon, Edward A	Weston, Lewis co	Coll
Brannon, Henry	Weston, Lewis co	Prep
Brannon, Lynn	Glenville, Gilmer co	Law
Brown, James E	Morgantown	Law
Brown, Milton Harvey	Halleck	Coll
Burdett, William Alexander	Ona, Cabell co	Coll
Burley, James Lindsey	Moundsville, Marshall co	Engin
Callahan, Otho	St. George, Tucker co	Prep
Camden, Wilson Lee	Fairmont, Marion co	Law
Carney, John Joseph	Jacksonville, Lewis co	Prep. & Coll
Carrigan, Charles Edgar	Sherrard, Marshall co	Prep
Casselberry, John	Morgantown	Prep
Chambers, Bailey Wilson	Walnut Grove, Roane co	Prep
Chambers, Okey Johnson	Walnut Grove, Roane co	Prep
Clark, Frank Wells	New Martinsville, Wetzel co	Law
Cobun, Lincoln Jacob	Masontown, Preston co	Law
Coffman, Carroll Clair	Bridgeport, Harrison co	Engin
Collier, James Fuller	Fairchance, Pa	Prep
Collins, James Higbee	Uniontown, Pa	Prep
Conn, George Hunter	Point Marion, Pa	Prep
Cooper, Arthur Benjamin	Parkersburg	Coll
Corbin, James Madison	Highland, Ritchie county	Prep
Corpenning, Wilson Joseph	Bridgeport, Harrison co	Prep
Crockard, Frank Hearne	Benwood, Marshall co	Engin
Cummings, Thomas Ignatius	Camden, Lewis co	Law
Dailey, Reginald Watson	Springfield, Hampshire co	Prep
Davis, Henry Garaway, Jr	Deer Park, Md	Prep & Coll
Davis, James Ewing	Mourville, Monongalia co	Prep & Coll
Davenport, Braxton	Charlestown, Jefferson co	Coll
Dawson, James Evans	Uniontown, Pa	Law
Dille, Thomas Reay	Morgantown	Prep
Deahl, Jasper Newton	Preston co	Coll
Dorsey, George Frederick	Morgantown	Prep & Coll
Downing, Thomas Finn	Ohio co	Coll
Dudding, Jerome	Winfield, Putnam co	Prep
Duncan, Henry Clay	Kenova, Wayne co	Prep
Duvall, Charles Raymond	Martinsburg	Coll
Duvall, Roy Perrin	Jordan Springs, Va	Prep
Eddy, William J	Cross Roads, Monongalia co	Coll
Edmiston, Matthew Arnold	Weston, Lewis co	Prep

Ellis, Joseph Rolly	Newburg, Preston co.	Prep & Coll
Ernest, Albert Conley	Littleton, Wetzel co.	Prep & Coll
Finnell, Ralph	Clarksburg	Coll
Fleming, Albert Fletcher	Morgantown	Prep
Ford, George Michael	Masontown, Preston co.	Coll
Fortney, Loraine	Independence, Preston co.	Prep & Coll
Francis, John Wiley	Moundsville, Marshall co.	Coll
Galford, John Everett	Walkersville, Lewis co.	Coll
Garlow, Ezra Clark	Maidsville, Monongalia co.	Engin
Gibson, Bert Thurman	Tunnelton, Preston co.	Prep & Coll
Gore, Claude Webster	Clarksburg	Coll
Gorman, Michael E	Morgantown	Prep
Gorman, Roger	Morgantown	Prep
Graham, Samuel Willey	Masontown, Preston co.	Coll
Gregg, Jesse Wilbur	Morgantown	Prep & Coll
Greynolds, Lew	Beverly, Randolph co.	Prep
Grier, John Alexander	Parkersburg	Coll
Hackney, Ida Esther	Morgantown	Coll
Hackney, Joseph Milton	Morgantown	Coll
Hackney, Lilian May	Morgantown	Coll
Hall, C. B.	Charlotte, Monongalia co.	Law
Hansbarger, Charles Jacob	Lindside, Monroe co.	Prep
Hartley, Alva Camden	Masontown, Preston co.	Prep
Harner, C. Milton	Morgantown	Prep & Coll
Hartman, Edward Thornton	Tunnelton, Preston co.	Coll
Hayes, U. S. Grant	Belington, Barbour co.	Coll
Hayes, Thomas Welford	Morgantown	Prep
Henderson, Joseph Lindsey	Monongalia co.	Coll
Herndon, Isaiah Christian	Bramwell, Mercer co.	Coll. & Law
Hines, William Edgar	Rock Camp, Monroe co.	Law
Hogg, Gory	Sewell Depot, Fayette co.	Prep
Holden, William Jackson	Craigmoor, Harrison co.	Prep & Coll
Holbert, John Thomas	Watson, Marion co.	Prep & Coll
Hood, Charles Philson	Shinnston, Harrison co.	Prep
Houston, Hough	Easton, Monongalia co.	Coll
Hughes, John Wilbur	Troy, Gilmer co.	Engin
Hutchinson, R. E. Lee	Leroy, Jackson co.	Law
Jackson, James Adolphus	Kingwood	Law
Jaco, Charles Homer	Morgantown	Prep
Jaco, Linn Miller	Easton, Monongalia co.	Coll
Jenkins, Samuel Rozel	Grafton, Taylor co.	Engin
Johnson, George William	Leetown, Jefferson co.	Coll
Johnson, James Martin	Long Reach, Tyler co.	Prep
Johnson, Thomas Carskadon	Long Reach, Tyler co.	Prep
Joliffe, William Sherman	Morgantown	Prep
Jones, Clement Ross	Knottsville, Taylor co.	Engin
Kincaid, Dell Busce	Knottsville, Taylor co.	Prep
Kitson, George Henry	Weston, Lewis co.	Prep
Knight, Charles Ridgely	Keyser, Mineral co.	Prep
Kauroku, Walchiro	Japan	Law
Krebs, Charles Edward	N. Martinsville, Wetzel co.	Prep & Engin
Kunst, George Henry A.	Printytown, Taylor co.	Prep
Lavelle, Thomas Monahan	Uniontown, Wetzel co.	Prep & Engin
Lazier, Arthur Moreland	Morgantown	Coll
Lemley, Cassius M. Carl	Burton, Wetzel co.	Engin
Leonard, William C.	Parkersburg	Prep
Lewis, Thomas Evan	Wheeling	Prep & Coll
Lewis, William Hay	Clarksburg	Prep
Link, Charles William	Duffields, Jefferson co.	Prep
Lipscomb, Archibald Jerome	St. George, Tucker co.	Prep
Lynch, Tillman Davis	Craigmoor, Harrison co.	Engin
Lynch, Waitman Elliott	Craigmoor, Harrison co.	Prep & Coll
Lyon, Harriet E.	Fredonia, N. Y.	Coll

Madagan, Wm. Christian	Morgantown	Prep
Martin, Andrew Kent	Philippi, Barbour co	Prep & Col
Martin, Philip Briton	Herring, Preston co	Prep
Mann, Edwin	Fort Spring, Greenbrier co	Law
Mayers, Clarence Edwin	Fairmont	Prep & Coll
McBee, Perry Cobb	Halleck, Monongalia co	Prep
McClung, John Alexander	Reedy, Roane co	Prep
McCoy, Ernest David	Buffalo, Putnam co	Prep
McCoy, George Loren	Wheeling	Coll
McEldowney, Samuel Bailey	New Martinsville	Prep
McGahan, Henry Keyser	Mineral co	Prep
McGrew, James Heermans	Morgantown	Prep
McMillan, Herbert Chalmers	Huntington, Cabell co	Prep
McWhorter, John Camillus	Berlin, Upshur co	Prep
McWhorter, John Scott	Buckhannon	Prep & Coll
Meyer, William Charles	Wheeling	Coll
Miller, Charles Frederick	Keyser, Mineral co	Prep
Minshall, Frederick Mortimer	Piedmont, Mineral co	Engin
Moore, John Morgan	Pt. Pleasant, Mason co	Prep
Morris, Clifton Elias	Pleasant Green, Ohio	Law
Morton, Eskridge Hampton	Addison, Webster co	Law
Neale, Thomas Muney	Keyser, Mineral co	Law
Nesbitt, Charles Torrence	Fairmont, Marion co	Coll
Norris, Sarah Lowther	Glenville, Gilmer co	Coll
Nuzum, John	Garfield, Jackson co	Prep & Coll
O'Brien, William Smith	Weston, Lewis co	Law
Oesterling, Harry Edward	Wheeling	Prep & Coll
O'Hara, Thomas Michael	Gladesville, Preston co	Prep & Coll
Paul, James Washington	Newburg, Preston co	Prep & Coll
Percy, Charles Sylvester	Normantown, Gilmer co	Prep
Percy, Evart	Normantown, Gilmer co	Prep
Peters, Samuel Vinson	Fort Gay, Wayne co	Prep
Pierpoint, Pliny Lewis	Sistersville, Tyler co	Prep
Phleeger, John Winter	Piedmont, Mineral co	Prep & Coll
Post, Melville Davisson	Romines Mills, Harrison co	Coll
Protzman, Jesse B	Morgantown	Prep
Ramsey, Robert Hudson	Clarksburg	Prep & Coll
Reay, David Chadwick	Duke, Monongalia co	Prep & Coll
Reynolds, Carson Howell	Morgantown	Prep
Reynolds, Frank Cornelius	Keyser, Mineral co	Law
Reynolds, Mabel Curry	Morgantown	Coll
Rich, Lot Luther	Morgantown	Prep
Ridgeway, Charles Nelson	Maidsville, Monongalia co	Prep
Riggle, Christian Beall	Middlebourne, Tyler co	Law
Rogers, Walter Dudley Neal	Scotdale, Pa	Prep & Coll
Rose, James Franklin	Addison, Webster co	Prep
Ross, Florian Gaie	Dunkard, Pa	Engin
Russell, Bennie Watson	Morgantown	Prep
Schoonmaker, George Filson	Uniontown, Pa	Prep
Schoonmaker, Robert Dalzell	Uniontown, Pa	Prep
Shaffer, Phil A	Morgantown	Engin
Sheppard, Addison Hite	Ready Ripple, Wirt co	Coll
Simmons, Harvey Jefferson	Spencer, Roane co	Coll
Singleton, George Edwin	Salt Licke Ridge, Braxton co	Coll
Sisler, Charles Benton	Stewartstown, Monongalia co	Coll
Sisler, Milliard Talford	Stewartstown, Monongalia co	Coll
Smith, Andrew Brown	Uniontown, Pa	Coll
Smith, Harry William	Ripley's, Tyler co	Coll
Steed, Henry Alfred	Newark, Wirt co	Prep
Stifel, Henry George	Wheeling, Ohio co	Coll
Summerfield, Charles Reese	Gatewood, Fayette co	Law
Suter, John Ellsworth	Piedmont, Mineral co	Coll
Settle, Joseph Boatwright	Deep Water, Fayette co	Law

Thomas, William Marion	Farmington, Marion co	Prep
Trotter, James Russell	Aurora, Preston co	Coll
Tate, Alexander Gorden	Randall, Monongalia co	Prep
Teter,, William Steel	Belington, Barbour co	Engin
Thayer, Arthur Love	Grafton, Taylor co	Coll
Vance, Cyrus Earl	Clarksburg	Prep & Engin
Vance, John Carl	Clarksburg	Prep & Coll
Vinson, Linn Boyd	Ceredo, Wayne co	Prep
Vinson, Linzy T	Ceredo, Wayne co	Prep
Wade, Charles	Morgantown	Coll
Warman, Altha	Morgantown	Coll
Welton, Archibald James	Fairmont, Marion co	Coll
White, Bennett Sexton	Morgantown	Coll
White, Charles Lewis	Morgantown	Coll
White, Dewitt	Morgantown	Coll
White, Kemble	Belton, Marshall co	Coll
White, Prescott Cushing	Morgantown	Coll
Wiles, John William	Aurora, Preston co	Coll
Williams, Allern Derrick	Uniontown, Pa	Prep
Willis, Walter Warren	Bridgeport, Harrison co	Prep
Wilson, Willis Levi	Ceredo, Wayne co	Coll
Woods, Ruth Cassandra	Morgantown	Coll
Yost, Lucian Nay	Amos, Marion co	Prep
Yost, Walter Burt	Oakland, Md	Prep & Coll
Zearley, Edmund Lee	Point Marion, Pa	Engin

Counties of West Virginia Represented.

Barbour 3, Berkely 1, Braxton 1, Cabell 2, Fayette 1, Gilmer 5, Grant 1, Greenbrier 1, Hancock 1, Hampshire 1, Harrison 14, Jackson 3, Jefferson 3, Lewis 9, Marion 8, Marshall 5, Mason 1, Mercer 1, Mineral 8, Monongalia 46, Monroe 2, Ohio 6, Preston 15, Putnam 2, Randolph 1, Ritchie 1, Rome 5, Taylor 6, Tucker 2, Tyler 6, Upshur 2, Wayne 5, Webster 2, Wetzel 6, Wirt 2, Wood 4. Total, 185.

RECAPITULATION BY STATES AND COUNTRIES.

West Virginia	185
Pennsylvania	14
Maryland	2
New York	1
Ohio	1
Virginia	1
Japan	1
Total enrollment for the year	205

Largest former enrollment (1890), 208.

DISTRIBUTION BY DEPARTMENTS.

Collegiate	55
Engineering	14
Law	25
Preparatory and Collegiate	29
Preparatory and Engineering	3
Preparatory	79

Schedule of Recitations University Department. CHAPEL at 8:15 A. M.

	8:30 A. M.	9:30 A. M.	10:30 A. M.	11:30 A. M.	3 P. M.	4 P. M.
MONDAY.	Physics. Intermediate Greek. Senior Mathematics. Senior German. Junior Metaphysics, Bridges and Graphics (F) Hydraulics and Sanitation (W).	Junior Greek Junior French. History. Zoology (F and W) Political Economy (S) *Analytical Chemistry.* Surveying (F). Roads & R R'ds (W. & S). R. R. Economies (W).	Junior Mathematics. *Anatomy* Inter. and Const. Law. Mechanics (F). Railroad Location (S) Strength of Materl's(W)	Chemistry. Junior German. Senior Metaphysics. *Senior Latin* *Physical Geography* (S). Topography (F). Engineering (W). Stereotomy (S)		Military Science & Tactics.
TUESDAY.	Intermediate Greek. Geology & Mineralogy. *Political Economy* *Agriculture.* *Historical Psychology.* Bridges and Graphics (F) Hydraulics and Sanitation (W).	Junior Greek. Junior French. Rhetoric. Structural Botany(F&W) *Political Science.* *Analytical Chemistry.* Surveying (F. Roads & R. R'ds (W,S). Descriptive Geom (W) Plans & Specificat'n (W)	Junior Mathematics Senior French. Senior English. Anatomy, Phys. and Hygiene. Mechanics (F) Contracts & Reports (F). Railroad Curves (W). Railroad Location (S).	Chemistry. Junior German. Junior English. *Senior Latin.* *Science of Religion.* Topography (F).	*Practical Physics* *Microscopy.* Drawing.	Military Science & Tactics.
WEDNESDAY	Physics. Intermediate Latin. Senior Mathematics. Senior German. Junior Metaphysics Bridges and Graphics (F) Hydraulics and Sanitation (W).	Jun. Greek *or* Jun. Latin Junior French. Zoology (F & W). Political Economy (S). *Analytical Chemistry.* Surveying (F). Roads & R. R'ds (W & S). R. R. Economies (W).	Junior Mathematics. Senior French. Intermediate Greek. *Anatomy.* Inter. and Const. Law. Mechanics (F) Strength of Materl's(W) Railroad Location (S)	Chemistry. Junior German. Senior Metaphysics. *Physical Geography* (S). Topography (F) Engineering (W). Stereotomy (S).	*Anglo-Saxon.* Drawing.	Military Science & Tactics.
THURSDAY.	Intermediate Latin. Geology and Mineralogy *Polit Economy.* *Agriculture.* *Historical Psychology.*	Junior Latin. Junior French, Rhetoric. Standard Botany (T,W). *Political Science* *Analytical Chemistry.* Surveying (F), Roads & R. R'ds (W, S) Descriptive Geom (W). Plans & Specificat'ns(W)	Junior Mathematics. Senior French. Senior English. Anatomy, Phys. and Hygiene. Mechanics (F). Contracts & Reports (F) Railroad Curves (W) Railroad Location (S).	Junior German. Junior English. Field Botany. *Senior Greek.* *Science of Religion.*	*Practical Physics.* *Microscopy.*	Military Science & Tactics.
FRIDAY.	Physics. Intermediate Latin. Senior Mathematics. Senior German. Junior Metaphysics.	Junior Latin. Junior French. History. Zoology (F, W) Political Economy (S). *Analytical Chemistry.* R. R. Economies (W).	Junior Mathematics. *Anatomy* Mechanics (F). Strength of Materl's(W) Railroad Location (S).	Jun.Germ. Jun. English Field Botany. *Senior Greek.* Senior Metaphysics. Topography (F) Engineering (W). Stereotomy (S).	*Anglo-Saxon.* Field Practice. Engineering.	

Elective Studies in *Italics.* The initials F., W., S., refer to the terms in which studies are pursued.

WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

STATION STAFF.

JOHN A. MYERS, A. M., PH. D.,
Director.

C. F. MILLSPAUGH, M. D.,
Botanist and Microscopist.

D. D. JOHNSON, A. M.,
Agriculturist.

R. J. J. DE RODDE, PH. D.,
Chemist.

A. D. HOPKINS,
Special Agent in Entomology.

SUSIE V. MAYERS,
Stenographer and Book-keeper.

The Station was organized in June, 1888, by the Board of Regents of the the West Virginia University, accepting the Congressional appropriation, electing a Director, directing a Station building to be constructed and outlining the policy it wished pursued, and appointing a committee of its body to perfect its organization. Since then, the building has been completed and provided with ample laboratories, offices, libraries, apparatus and the necessary facilities for carrying on the scientific investigations contemplated under the Congressional Act establishing the Station.

The objects of the Station are stated as follows in the Act establishing it:

Section 2. "That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects of crops of different kinds; the adaptation and value of

grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may each be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

The scientific work of the Station is published in bulletins and in the Annual Report, which are distributed free of charge to all farmers in the State desiring the same. In addition to this, the Station attempted during the past winter to develop an interest in farmers' institutes in various sections of the State, and a number of farmers' meetings were held with this object in view. During the past year considerable attention has been devoted to experimenting upon the effects of fertilizers upon the soils in different sections of the State. A large amount of Botanical, Entomological and Chemical work has been done. The results of the work in the various departments not already published will appear in due time.

Many farmers seem to be under the impression that this is a seed distributing bureau, and we have had many applications for seeds, fertilizers, etc., from parties who do not seem to understand the duties of the Experiment Station as stated in the law organizing it. It will be well for all to understand that at present there are no seeds, fruit trees, or anything of this character to be distributed from this Station. There is also no provision by which the citizens of the State should expect scientific investigations carried out which bear solely upon private interests; such as analyses of minerals, mineral waters, etc., and the Station does not expect to undertake such work. We shall, however, hold ourselves in readiness, so far as lies within our power, to carry out the objects of the law, and it is hoped that the public will recognize that neither the Board of Regents nor any one connected with the Station has any power to expend the funds in directions other than those provided for by the law.

The students have free access to the Station, and those who are sufficiently advanced may become acquainted with its processes of investigation and use its library, or study practical dairying, free of charge. The work of the Station, however, is not intended to be in the form of instruction, and persons wishing to work in the Station building with any of the investigators must be subject to such regulations as may be prescribed; work in the Station having no relation whatever to the course of college studies.

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1881-1892